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Article

“No Need to Dress to Impress” Evidence on Teleworking during and after the Pandemic: A Systematic Review

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Abstract: Due to the working conditions imposed by the COVID-19 pandemic, teleworking also known as remote work has witnessed an increase in use, prompting a resurgence of interest in the topic among researchers. This article analyzes the evolution of literature before, during, and after the pandemic, as well as the research foci through an application of the antecedents, decisions, and outcomes framework. A systematic literature review methodology was employed using the evidence from 136 articles from 2016 to 2023. This review is about ‘telework literature in business, management, and accounting areas published in English’. Opportunities are identified for future studies and the findings afford managers with the advantage of understanding the crucial dimensions of telework. The bibliometric analysis revealed the significant impact of the COVID-19 pandemic on the widespread acceptance of teleworking globally, accompanied by a surge in studies on this subject. Additionally, the study provides deeper insights into the progression of teleworking literature since 2016 and organizes the various topics explored in this field.

Keywords: teleworking; remote work; human resources; companies; advantages; disadvantages; systematic literature review



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1. Introduction

The rapid development of new digital technologies such as smart technology, artificial intelligence and automation, robotics, cloud computing, and the Internet of Things is changing the nature of work and business models. Designated as the “Fourth Industrial Revolution” or “Industry 4.0”, the speed and scale of technological change have given rise to concerns about the transformation of workplaces (Trenerry et al. 2021). Information and communication technologies (ICT) allow people to connect with friends and family as well as co-workers and managers, at any time and in any place (Eurofound & ILO 2017). With greater technological resources made available by organizations for their employees, the incidence of employees working at remote locations, away from the conventional workplace, continues to grow rapidly (Charalampous et al. 2019).

The concept of remote working arose during the oil crisis in the early 1970s, encouraged by the belief that the worsening traffic problems in large cities could be minimized by creating remote-working centers and even allowing employees to work from their own homes (Pyöriä 2011). Remote work has progressed over the ensuing decades with the widespread adoption of tools like personal mobile computers, the internet, and mobile phones (Eurofound 2020). Teleworking was initially defined as working outside the conventional location or at home, while later definitions have added the use of ICT and virtual work (Coenen and Kok 2014). This has transformed the physical and social environments of work, whereby at least some part of the work is carried out in other (nonconventional) locations and interaction with colleagues takes place via email, messages, or videoconferencing (Gajendran and Harrison 2007). Findings of studies carried out before the COVID-19 pandemic showed that teleworking can have both positive and negative effects, depending

on the profile of teleworkers, the means of measuring work quality, the support received from managers, personal preferences, and the employee's family structure (Charalampous et al. 2019). Although teleworking is not a new concept, its adoption has been slower than expected (Pyöriä 2011). Its impact became more evident following the outbreak of COVID-19 in March 2020, when a stay-at-home lockdown was imposed as one of the measures aimed at limiting the spread of the pandemic (Eurofound 2022; Gostin et al. 2020). Due to public health measures including social distancing, lockdown, and the closure of many workplaces, the number of employees teleworking doubled between 2020 and 2021 (Eurofound 2022).

Because of the global pandemic, which forced the implementation of teleworking, research on the topic has become increasingly important as this form of work has continued and even flourished. Due to the multiplicity of definitions, some studies are limited to workers whose home is their only place of work, others are broader, encompassing various nonconventional workplaces, and still others address only workers for whom telework is their normal form of employment (Eurofound & ILO 2017). There is thus a wide range of studies, which strongly affects the type and availability of data, which in turn leads researchers to different conclusions (Eurofound & ILO 2017). Because to date no published work exists to the authors' knowledge that encompasses the study of the evolution of teleworking comparing the pre-and post-pandemic periods, a review of all articles would be beneficial by structuring and analyzing current knowledge in this field. We therefore considered it valuable to carry out a systematic literature review (SLR), as it is the most appropriate method for managing the diversity of knowledge on a subject (Tranfield et al. 2003). To analyze the evolution of the study of teleworking, especially following its sharp rise since the global COVID-19 pandemic, the following research questions were formulated.

- Q1—How did the study of teleworking grow regarding the number of publications and number of citations between 2016 and 2023?
- Q2—Who are the biggest contributors, in terms of authors, journals, and countries, to the development of the study of teleworking?
- Q3—What are the antecedents, decisions, and outcomes of teleworking?
- Q4—What are the future research and publication opportunities in the study of teleworking?

The ADO (antecedents, decisions, and outcomes) framework is employed to address Q3 in this study. This framework offers significant advantages in conducting systematic literature reviews (SLRs). By systematically categorizing literature based on antecedents, decisions, and outcomes, researchers gain a structured approach to analyze and synthesize existing knowledge within a particular domain. This framework enables a comprehensive understanding of the factors influencing decisions and their subsequent outcomes, fostering deeper insights into the underlying mechanisms at play. Moreover, by organizing findings according to these categories, researchers can identify patterns, trends, and gaps in the literature more effectively, facilitating the development of robust theoretical frameworks and guiding future research directions (Paul and Benito 2018).

2. Literature Review

2.1. Teleworking

Telework, also known as remote work or telecommuting, is a work arrangement where employees perform their job duties from locations outside the traditional office, such as their homes or remote sites. It relies on telecommunications and digital technologies for communication, collaboration, and task completion. Telework can be either full-time remote work or a blend of remote and in-office work, depending on the preferences and requirements of the employer and the employee (Vartiainen 2021).

According to (Gajendran and Harrison 2007), the term "distributed work" is defined as a working model in which employees and their tasks are situated in environments at a distance from the physical location of the organization. The authors state that the best-known type of work is "telecommuting", also known as "teleworking" or "remote working".

Telecommuting emerged in the 1970s in the United States of America (USA) as a response to the oil crisis that cautioned for energy savings and the need to reduce commuting (Athanasiadou and Theriou 2021). The flexibility provided by remote work has been demonstrated to be beneficial for both organizations and employees (Athanasiadou and Theriou 2021). According to (Nilles 1997), teleworking can be defined as the arrival of the work to the workers, rather than the arrival of workers at work – the aim being to replace the workers' transportation with telecommunication, through a commuting network. Teleworking was then further defined as work undertaken outside the conventional location, using technologies to communicate with the workplace (Nilles 1997). An inspection of the literature reveals that there exists no universally accepted definition, but instead, several names that describe teleworking. Nevertheless, two of the criteria most agreed upon by the authors are the replacement of the conventional workplace with a remote location and the use of ICT (Athanasiadou and Theriou 2021). The definitions include discordant aspects, as these arise due to changes in the socioeconomic context, evolving technologies, and the goal of the investigations. These differ due to the absence or divergence of elements such as the extent of work carried out via teleworking, the type of employment contract, and/or the understanding regarding the substitute workplace (Allen et al. 2015).

According to (Golden and Veiga 2005), teleworking is defined as carrying out part of the work outside the conventional workplace, often from home, and communicating through computers.

The emergence of smartphones, tablets, and other technologies made it possible to work anywhere, with the evolution of ICT being fundamental, facilitating interactions and information sharing (Boell et al. 2016). As these novel devices multiplied, more and more jobs emerged that could be carried out remotely. Considering previous investigations, (Allen et al. 2015) developed a definition that encompasses all the fundamental features, defining teleworking as a form of work that involves the elements of an organization, replacing some of the working hours (ranging from a few hours per week to full time) with work outside of the conventional workplace, usually at home, and interacting with colleagues through technology.

2.2. Types of Teleworking

Kurland and Bailey (1999), described four types of teleworking: home-based telecommuting, satellite offices, neighborhood work centers, and mobile working. Home-based telecommuting refers to work performed by persons who often work from home. A person can be considered a telecommuter if they have a telecommunications link with the company as simple as a telephone. However, telecommuters also habitually use additional means of communication such as email, links from their personal computer to the company office, and fax. The company or employee purchases the equipment necessary to perform their functions (Kurland and Bailey 1999). Satellite offices refer to convenient workplaces for workers other than the home or the company's office. These workplaces are for individuals from only a single company. Satellite offices are furnished with office furniture and other equipment provided by the company. They are usually located outside urban centers, in areas with lower real estate and rental costs and in areas closer to employees' homes (Kurland and Bailey 1999).

A neighborhood work center is identical to a satellite office except that it is accessible to employees from other companies. These centers are furnished and equipped with the technology necessary for teleworking. Each company rents the space for as long as it deems necessary (Kurland and Bailey 1999).

Mobile working refers to individuals who work anywhere and anytime, via telecommunications (Kurland and Bailey 1999). Although different types of teleworking are mentioned in the literature, there is agreement on three main categories: home-based telecommuting, group teleworking (i.e., neighborhood work center), and mobile teleworking, also referred to as nomadic teleworking (Athanasiadou and Theriou 2021; Pérez et al. 2002).

2.3. Advantages and Disadvantages of Teleworking

Much research has been carried out seeking to understand the impact of teleworking on organizations and individuals, as this type of work entails both benefits and challenges at the individual, organizational, and societal levels (Tables 1 and 2).

Table 1. Advantages of teleworking for the employee, organization, and society. (Source: authors, based on literature review).

Employee	
Saving time and costs on travel	(Harpaz 2002; Pinsonneault and Boisvert 2001)
Increased job opportunities	(Illegems and Verbeke 2004)
Greater autonomy and flexibility	(Gajendran and Harrison 2007; Harpaz 2002; Pérez et al. 2002; Pinsonneault and Boisvert 2001)
Better balance and reconciliation in personal and professional life	(Boell et al. 2016; Harpaz 2002; Kurland and Bailey 1999)
Stress reduction	(Pinsonneault and Boisvert 2001)
Fewer distractions and less wasting of time on informal conversations	(Fonner and Roloff 2010; Pinsonneault and Boisvert 2001)
Greater commitment and job satisfaction	(Felstead and Henseke 2017; Gajendran and Harrison 2007; Kurland and Bailey 1999; Fonner and Roloff 2010; Perry et al. 2018)
Greater creativity and capacity for innovation	(Fonner and Roloff 2010; Perry et al. 2018)
Organization	
Cost reductions	(Harpaz 2002; Kurland and Bailey 1999; Pérez et al. 2002; Vega et al. 2015)
Competitive advantage in recruiting and retaining employees	(Illegems and Verbeke 2004)
Elimination of the geographic location barrier	(Harpaz 2002; Illegems and Verbeke 2004)
Increased productivity	(Bailey and Kurland 2002; Pérez et al. 2002)
Reduced absenteeism among teleworkers	(Harpaz 2002; Kurland and Bailey 1999)
Society	
Reduced harm to environment	(Harpaz 2002; Kurland and Bailey 1999; Allen et al. 2015)
Reduced road traffic	(Harpaz 2002; Kurland and Bailey 1999; Allen et al. 2015)
Savings on infrastructure and energy	(Harpaz 2002)
Solutions for populations with special needs	(Harpaz 2002)
Strengthening the local economy	(Allen et al. 2015)

Table 2. Disadvantages of teleworking for employee, organization, and society. (Source: authors, based on literature review).

Employee	
Reduction in face-to-face conversations, and limits on knowledge and ideas sharing	(Allen et al. 2015; Bélanger et al. 2013; Charalampous et al. 2019; Cooper and Kurland 2002; Harpaz 2002)
Jeopardized career progression	(Charalampous et al. 2019; Cooper and Kurland 2002; Gajendran and Harrison 2007)
Reduced identification with the organization's values and goals	(Bailey and Kurland 2002)
Social and professional isolation	(Allen et al. 2015; Charalampous et al. 2019; Cooper and Kurland 2002; Harpaz 2002)

Table 2. Cont.

Difficulty maintaining boundaries between private and work life	(Bailey and Kurland 2002; Charalampous et al. 2019; Felstead and Henseke 2017; Gajendran and Harrison 2007; Harpaz 2002)
Greater need for time and energy to obtain information and approvals	(Perry et al. 2018)
Increase in work hours as there is difficulty in disconnecting from work	(Charalampous et al. 2019)
Organization	
Inefficiency in managing employees when teleworking	(Bailey and Kurland 2002; Harpaz 2002; Pérez et al. 2002)
Perception of unequal workloads and potential tension	(Pérez et al. 2002)
Difficulty in transmitting the company's identity and culture	(Harpaz 2002; Pérez et al. 2002)
Costs involved in the transition to teleworking	(Harpaz 2002)
Risk to data security	(Illegems and Verbeke 2004)

2.3.1. For the Employee

Advantages

At the individual level, one of the greatest gains from adopting teleworking is the increase in family and leisure time (Nakrošienė et al. 2019). Managing one's schedule allows for a better balance and reconciliation between personal and professional life (Boell et al. 2016; Coenen and Kok 2014; Harpaz 2002; Kossek et al. 2015; Kurland and Bailey 1999), which can boost the employee's well-being (Boell et al. 2016). Teleworking is positively related to autonomy and flexibility (Gajendran and Harrison 2007; Harpaz 2002; Pérez et al. 2002; Pinsonneault and Boisvert 2001), as it allows workers to choose the location and decide how and when to address their tasks, thereby increasing both job satisfaction (Gajendran and Harrison 2007; Kurland and Bailey 1999) and productivity (Gajendran and Harrison 2007). Couples with young children and especially women who are employed can benefit from work practices that afford flexibility, such as teleworking (Athanasiadou and Theriou 2021). Other notable benefits of teleworking are the time and cost savings associated with reduced travel (Harpaz 2002; Pinsonneault and Boisvert 2001), both of which improve the employee's quality of life and reduce stress. Also, the time that is not spent commuting to the workplace can be used for other tasks (Pinsonneault and Boisvert 2001).

Disadvantages

Working in the company's facilities brings with it moments of distraction including conversations with colleagues, phone calls, dealing with situations and colleagues outside the normal working hours, and noise in the workplace environment (Fonner and Roloff 2010). Performing one's work in a quieter environment with fewer interruptions and less live communication in terms of sharing information, ideas, and feedback may ultimately be a way to reduce disruptions and the wasting of time and trim down the sharing of less valuable information and the number of superfluous meetings (Fonner and Roloff 2010; Pinsonneault and Boisvert 2001). The flexibility of teleworking can generate greater employee commitment and satisfaction (Felstead and Henseke 2017; Fonner and Roloff 2010; Perry et al. 2018), and this engenders possibilities for greater creativity and innovation for both the employee and the organization (Fonner and Roloff 2010; Perry et al. 2018). Illegems and Verbeke (2004), state that job opportunities multiply as the geographic location is no longer an obstacle since employees can perform their tasks anywhere. This increase in opportunities also extends to workers who are physically challenged, as teleworking eliminates many hurdles to obtaining employment (Harpaz 2002; Illegems and Verbeke 2004). On the other hand, teleworking brings the risk of isolation, both socially and professionally (Allen et al. 2015; Charalampous et al. 2019; Cooper and Kurland 2002), through reduced knowledge sharing and face-to-face encounters with colleagues and superiors (Allen et al.

2015; Bélanger et al. 2013). These are mentioned as the main disadvantages of teleworking (Nakrošienė et al. 2019), which can lead to a decrease in employees' identification with the organization's values and goals (Bailey and Kurland 2002).

Although teleworking is associated with greater ease of managing professional and personal commitments, providing an increase in the time available for family life, some studies indicate that because of the lack of boundaries between private and work life, employees may have difficulty disconnecting from work at the end of the day and on weekends (Bailey and Kurland 2002; Charalampous et al. 2019; Felstead and Henseke 2017; Gajendran and Harrison 2007; Harpaz 2002). The technologies used to perform remote work make employees available at any time, encouraging them to work longer hours (Charalampous et al. 2019). Other authors report a negative perception on the part of teleworkers regarding their career progression to be an additional disadvantage. Some employees consider that the visibility of their performance and behavior by superiors is diminished and feel jeopardized as a result (Charalampous et al. 2019; Cooper and Kurland 2002; Gajendran and Harrison 2007). Teleworkers may simultaneously experience greater stress as they need to spend more time and energy contacting colleagues to obtain information or approvals, coordinate tasks, and even complete basic tasks without access to technology and equipment found on the company's premises (Perry et al. 2018).

2.3.2. For the Organization

Advantages

One of the advantages for organizations is a reduction in absenteeism among teleworkers, as even when they are sick, they can often work at home (Harpaz 2002; Kurland and Bailey 1999). The fact that teleworkers have fewer interruptions from colleagues, work longer hours, and have greater flexibility in their schedule is also a benefit to the productivity of organizations (Bailey and Kurland 2002; Pérez et al. 2002). Teleworking allows companies to reduce operational costs and those related to location (Vega et al. 2015). Facilities costs, for example, can be lower if workplaces are in areas with lower real estate values. Having fewer on-site employees in a company drives down spending on water, electricity, maintenance of air conditioning units, security, and other expenditures (Harpaz 2002; Kurland and Bailey 1999; Pérez et al. 2002). Illegems and Verbeke (2004), describe as a competitive advantage the absence of geographic barriers in the recruitment and retention of employees who prefer teleworking. This advantage is also obtained when employees live in locations prohibitively distant from the company and even in other countries, thereby improving the range and availability of talent and human resources (Harpaz 2002). Teleworking can also create opportunities for the sharing of information resources by connecting human resources through networks that allow for more efficient use of organizational resources (Vega et al. 2015).

Disadvantages

Disadvantages felt by organizations include the problems in supervising and controlling teleworkers (Bailey and Kurland 2002; Harpaz 2002; Pérez et al. 2002), difficulty in retaining their loyalty, and the struggle to transmit the company's identity and culture (Harpaz 2002; Pérez et al. 2002). Another negative factor can be the conflicts that may arise between teleworkers and employees who work on the company's premises, as there may come to be a perception of an increase in the workload on one's group, some may find it difficult to interact with colleagues in the other work situation, and a feeling of inequality and even injustice may prevail (Pérez et al. 2002). According to (Harpaz 2002), companies view the costs involved in the transition to teleworking in training, technological equipment, and technical support at home as disadvantages. Illegems and Verbeke (2004), also identify remote access to company data as a drawback as it increases the risk of information leakage, compromising its security.

2.3.3. For Society

Advantages

In addition to the impacts on companies and their employees, studies show that teleworking brings benefits to the environment, as there are fewer private and public motor vehicles on the road, thus easing traffic issues and reducing carbon dioxide emissions (Harpaz 2002; Kurland and Bailey 1999; Allen et al. 2015). Furthermore, it helps municipalities to keep down their expenditures on transport infrastructure, electricity, and road repairs, as more people work at home and travel less (Harpaz 2002). The fact that employees can work where it is more convenient for them helps with regional development as there is the possibility of strengthening the local economy and boosting labor in that region, even if companies are not located there (Allen et al. 2015).

As mentioned above, teleworking creates opportunities through the removal of physical barriers (Harpaz 2002; Illegems and Verbeke 2004). This, according to (Harpaz 2002), is also an advantage for society across the board, as employment opportunities are extended to more members of the community. Persons who are physically challenged, parents caring for young children, and/or people who have difficulty leaving home for reasons of religion, tradition, or culture can be incorporated into the job market through teleworking (Harpaz 2002).

Disadvantages

Telework also presents several disadvantages that can impact society. One significant concern is the potential lack of parental interaction with children, which can lead to social inadequacies in the younger generation (Elsamani and Kajikawa 2024). Additionally, telework has the potential to exacerbate inequality, as not all employees have equal access to teleworking opportunities or suitable home environments (Elsamani and Kajikawa 2024).

3. Methodology

Scholarly literature has experienced exponential growth, and since 1989, systematic literature reviews (SLRs) have been increasingly used as a research tool, as it is a method to compile and analyze large sets of data from published studies and is considered high-quality evidence (Donato and Donato 2019). The method is a replicable, scientifically sound, and transparent process that minimizes biases (Tranfield et al. 2003). It has achieved a fundamental role in academic research to assemble in a single place the knowledge that exists on a given subject (Linnenluecke et al. 2020). An SLR collects, identifies, and critically analyzes published research studies, updating the reader with the current standing of scholarship on a topic of interest (Carrera-Rivera et al. 2022).

The present SLR seeks to answer the following research questions:

- Q1—How did the study of teleworking grow regarding the number of publications and number of citations between 2016 and 2023? Justification: The aim is to carry out a quantitative longitudinal analysis to explore the impact of the COVID-19 pandemic on the evolution of the study of teleworking.
- Q2—Who are the biggest contributors, in terms of authors, journals, and countries, to the development of the study of teleworking? Justification: Bibliometric analysis also allows for identifying the main contributors in terms of journals, countries, authors, and the main concepts studied, which will be useful for identifying scholarly leadership on the topic to contribute to cooperation between researchers.
- Q3—What are the antecedents, decisions, and outcomes of teleworking?
- Q4—What are the future research and publication opportunities in the study of teleworking? Justification: By applying the antecedents, decisions, and outcomes (ADO) framework, the aim is to identify and systematize which concepts/themes are studied by the authors. In doing this, we can identify possible gaps and establish guidelines for future studies.

3.1. Selecting the Articles

The validity of a study pivots on the appropriate selection of a database, as it must adequately cover the area under investigation. Scopus is currently the largest multidisciplinary database in existence and at the time of this writing indexes 26,591 peer-reviewed journals with more than 97 million documents (Elsevier 2023). It is considered one of the most important bibliographic databases (Cobo et al. 2011), and for this reason was chosen to apply in the study. The selection took place on 20 June 2023 using the keywords “Telework”, “Telecommuting”, and “Teleworking”. The choice of these keywords was based on an attempt to gather as many relevant articles as possible because different authors use different designations for teleworking. This first search returned 4736 documents. It was then necessary to establish inclusion criteria to limit the scope of the investigation to the field of articles written in English, between 2016 and 2023, and in “Business, Management, and Accounting” (Table 3). The second search identified 379 articles. We then inspected the titles and abstracts of the 379 articles to identify those that address our research goals, in other words, to exclude “false positives”, i.e., articles that mention the keywords but refer to different subjects. No study should be excluded because it is deemed to be of low quality or to contain methodological or other flaws, as this could bias the review (Linnenluecke et al. 2020). This step led to the exclusion of 243 articles that were outside the scope of the study or did not develop the concept of teleworking, leaving a total of 136 articles to be included in our SLR. Our selection of articles followed the guidelines of the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) research strategy, which is an update of the 2009 guideline. These guidelines have been widely adopted by authors cited in over 60,000 articles in the Scopus database (August 2020; Page et al. 2021). The PRISMA flow diagram Figure 1 illustrates the steps used to eliminate articles not relevant to the study.

Table 3. Inclusion and exclusion criteria.

Inclusion and Exclusion Criteria		Justification
Period of publication	2016 to 2023	Although teleworking already existed, the pandemic accelerated its growth (Eurofound 2020). The sample was restricted to the four years preceding the COVID-19 outbreak and the three years following it, so that a comparison could be made.
Document's type of source	Journal articles, excluding books, conference proceedings, reports, research	We chose to include only articles from journals and no other sources, as they are subjected to peer review (Ramos-Rodríguez and Ruiz-Navarro 2004).
Area of study	Business, Management, and Accounting	Our study was limited to the area of Social Sciences, more precisely to Business, Management, and Accounting research.
Language	English	The English language dominates scientific publications, with more than 90% of indexed articles (Di Bitetti and Ferreras 2017).

(Source: authors).

Adapted from: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. “The PRISMA 2020 statement: an updated guideline for reporting systematic reviews”. BMJ, 2021.

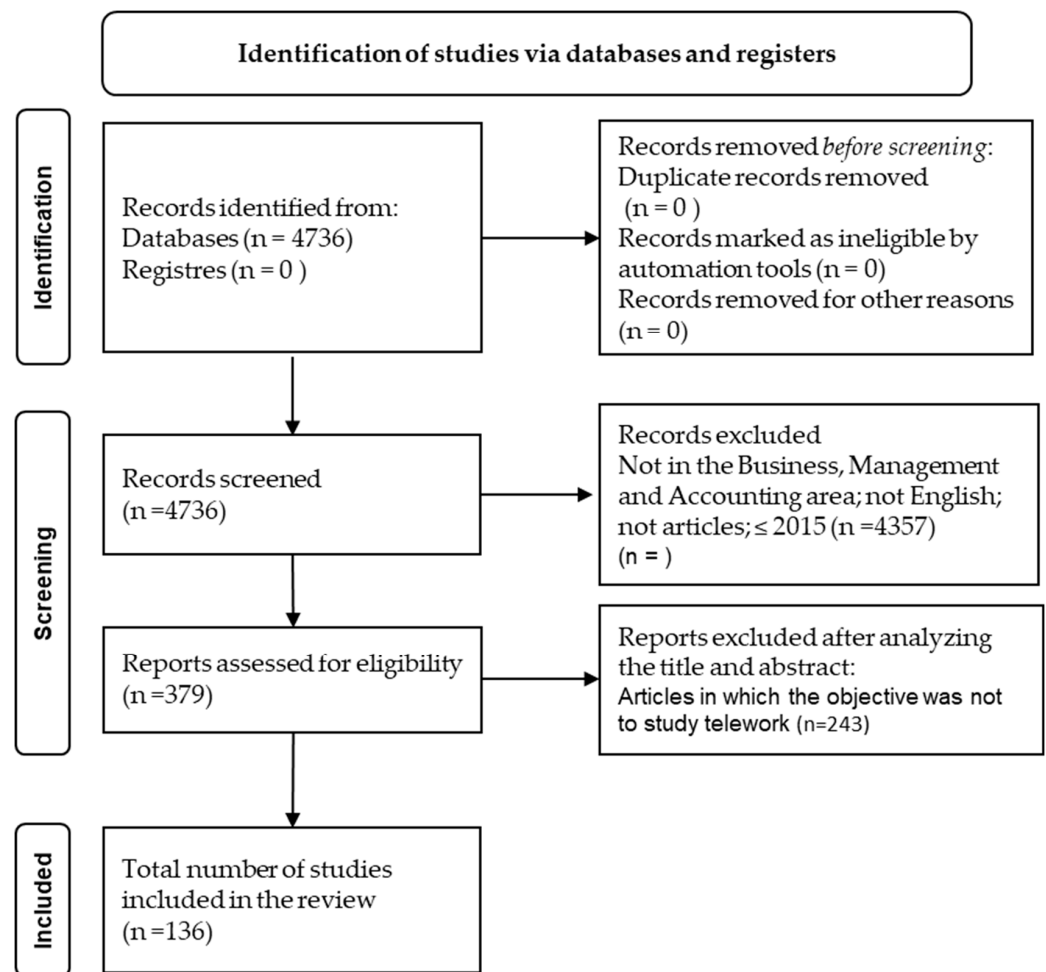


Figure 1. PRISMA flow diagram.

3.2. Data Analysis

3.2.1. Bibliometric Analysis

Bibliometric analysis is a methodology used to quantitatively analyze large volumes of scientific data. It is useful for structuring the data and studying the evolution of literature on a topic, thereby affording an overall view of a subject and directions of research (Donthu et al. 2021). It allows one to understand the contribution and impact of authors, journals, and countries. It also constructs bibliometric “maps” that describe how research fields are conceptually, intellectually, and socially structured (Cobo et al. 2011), establishing relationships between the main publications, authors, institutions, themes, and other characteristics of the subject under study (Donthu et al. 2021). The methodology is not new, but it has witnessed tremendous growth in recent years (Donthu et al. 2021). It has been used to analyze the evolution of journals (Martínez-López et al. 2018), sustainable tourism (Niñerola et al. 2019), and additive manufacturing, and there are works related to teleworking and virtual teams (Caputo et al. 2023; Herrera et al. 2022; Šimová and Zychová 2023).

3.2.2. Content Analysis

Reviews based on frameworks make use of an organizational structure to scientifically synthesize the information that exists on a certain subject (Paul and Barari 2022). Several frameworks exist, including antecedents, decisions, and outcomes (ADO) by (Paul and Benito 2018); theories, contexts, and methods (TCM) (Paul et al. 2017); theories, constructs, characteristics, and methods (TCCM) (Paul and Rosado-Serrano 2019); the integrated framework ADO-TCM (Lim et al. 2021), and the interrogative framework consisting of what, why, where, when, who, and how (5W1H) (Lim 2020). These frameworks are

recommended to be used for structuring systematic literature reviews as they help authors to provide a clear and complete understanding of the breadth and depth of a topic, and thus justify future empirical investigations providing a deeper impact on the advancement of the field under study (Paul et al. 2021). In line with the recommendation of (Paul et al. 2021), and the reviews carried out by (Lim and Rasul 2022; Paul and Benito 2018; Singh et al. 2021; Södergren 2021; Wirtz et al. 2022), we apply the ADO framework to analyze the content of the articles in our sample. Specifically, the ADO framework is utilized to describe how the variables of antecedents, decisions, and outcomes are present in the bibliometric data.

4. Results and Discussion

4.1. Bibliometric Analysis

To answer Research Questions 1 and 2, we performed a bibliometric analysis of 136 articles. On 20 June 2023, article data were extracted from the Scopus database to an Excel sheet to analyze the following features: article title, publication date, and details of the case (name(s) and affiliation(s)), title of the journal, abstract, keywords, and citation count). With this information, it is possible to determine which authors, journals, and countries contributed, as well as the evolution of literature in terms of number of articles and citations.

4.1.1. Evolution of Publications and Citations

As seen in Figure 2, from 2016 to 2023, there was a sharp increase in publications in 2020, soaring exponentially two years later. Before the emergence of COVID-19, there was a constant and gradual increase in scientific production. In the transition to 2020, that is, following the outbreak of COVID-19 and periods of confinement around the world, there was a considerable increase in the number of publications from 8 articles in 2019 to 15 in 2020. Subsequently, some restrictions remained in place and interest in this subject continued to grow with 18 articles published in 2021 and 50 in the following year. By the time of the last search in June 2023, 26 articles had already been published, exceeding the production of scientific research in both 2020 and 2021. Before the emergence of the pandemic, there were 27 articles (19.9% of the sample) and 113 articles (80.1%) after the outbreak. As with the number of articles published, the number of citations has also increased over the years, especially since the beginning of the pandemic, which demonstrates the growing interest in this subject. Between 2016 and 2019, there was a slow rise in the number of citations, going from 1 to 77 citations in 3 years. In just one year, it is possible to observe an increase of 145.5%, with articles being cited 189 times in 2020. It is really from 2021 and 2022 on, however, that there is an explosion in the number of citations, 574 and 1230, respectively. As of June, in the year of this writing 2023, we see that the articles have already been cited 813 times. Therefore, in the 4 years before the pandemic, there were a total of 112 citations (3.8%) while during the pandemic years until June 2023, a total of 2806 citations (96.2%) have been recorded, with 2022 contributing the greatest number (42.2%). These findings reveal the growing trend in the literature that began with the COVID-19 pandemic.

To answer Research Question 2, we analyzed the authors, journals, and countries that contributed to the study of teleworking in the sample.

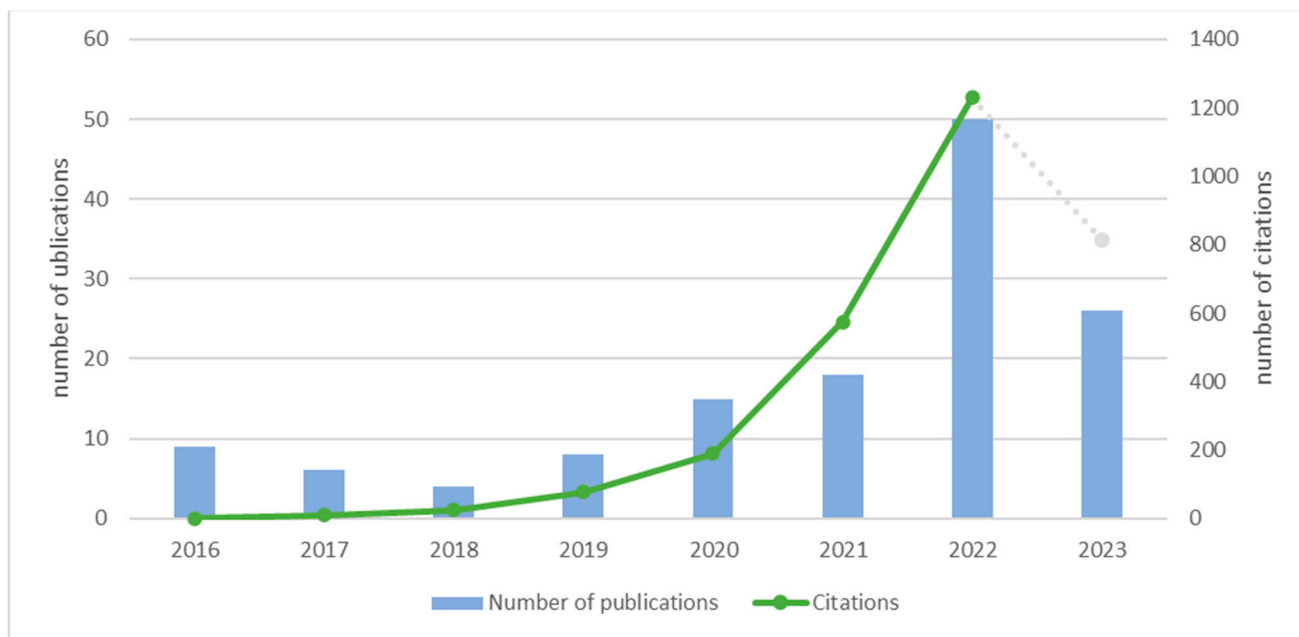


Figure 2. Evolution of publications and citations 2016–2023. (Source: Scopus database).

4.1.2. Authors

Analysis of the authors revealed 337 who have contributed to the development of literature on teleworking. Consistent with the growing trend in the number of articles published, the data reveal that the number of new authors entering the sample has grown in the last 7 years: 65 published at least one article until 2019, while 272 published at least one after 2019. There are 16 authors in the sample with at least two publications (4.7% of the total number of authors in the sample) and only 4 have more than two publications. T.D. Golden was involved in four articles, and in three of which he was the principal author, thus being the largest contributor regarding the number of publications. I. Anwar, M.T. Jamal, and N.A. Khan contributed to three articles each in which they were joint authors (M.T. Jamal was always the principal author). Table 4 reports the authors having the greatest number of citations. Among these, A. Felstead and G. Henseke stand out as the co-authors of the most-cited article (Table 4). T.D. Golden is also one of the most-cited authors with his four articles, averaging 50 citations per publication. Note that although I. Anwar, M.T. Jamal, and N.A. Khan are among the authors with the greatest contribution to the topic, they have only 67 citations in their publications and are not included in the ranking of most-cited authors.

Table 4. Most-cited authors.

Ranking	Author	Citations
1	Felstead, A.; Henseke, G.	326
2	Golden, T.D.	198
3	Nakrošienė, A.; Bučiūnienė, I.; Goštautaitė, B.	190
4	Delanoeije, J.; Verbruggen, M.	177
5	Eddleston, K.A.	167

(Source: Scopus database).

4.1.3. Countries

Data on the institutional affiliations of the authors are useful for understanding the geographic range of the sample Figure 3, which proves to be a subject of interest worldwide. The range covers 161 institutions and 45 countries that have published at least one article on teleworking (19 in Europe, 7 in America, 15 in Asia, 2 in Africa, and 2 in Oceania). In total, 9 countries account for more than five articles, 19 countries more than one, and the

remaining 17 contributed with one publication each. The USA and European countries, especially Spain ($n = 10$), Germany ($n = 9$), Portugal ($n = 9$), and the United Kingdom ($n = 8$), stand out. India ($n = 9$), Australia ($n = 8$), and the Republic of Korea ($n = 8$) are also countries that are ranked among those with the highest number of publications. Although there was an increase in the number of teleworkers between 2008 and 2019, the pandemic triggered dramatic growth (Eurofound 2022), and we see that most of the countries in the sample (56.8%) had their first publication on teleworking after 2019. Table 5 reports the countries that published the most about teleworking before and after COVID-19 and their relationship with the countries recording the highest number of confirmed cases of COVID-19 until 30 June 2023 (WHO 2023).

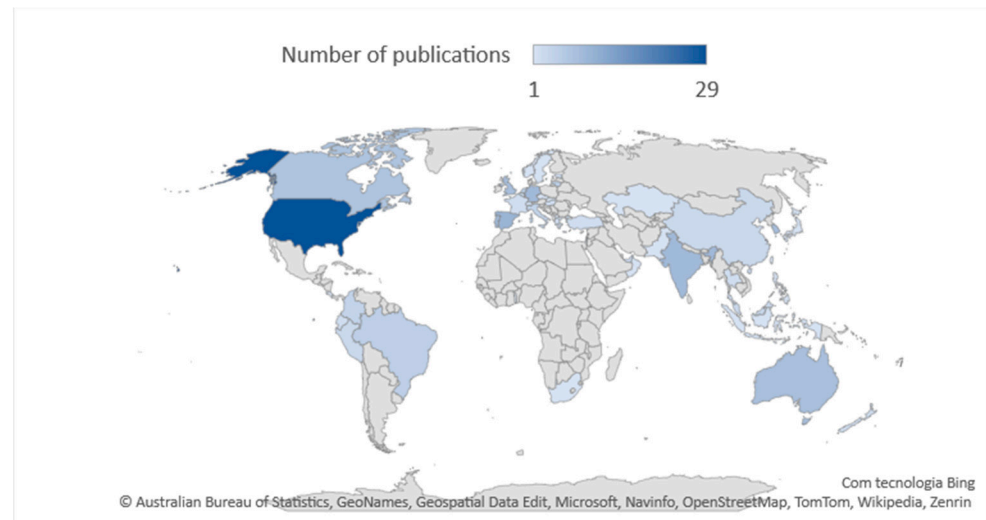


Figure 3. Geographic distribution of articles (Source: Scopus database).

Table 5. Countries with the most publications before and after the pandemic, and their relationship with countries reporting the most infections.

Ranking	Country	Before COVID-19	Ranking	Country	After COVID-19	Ranking	Country	Number of Infections *
1	USA	9	1	USA	20	1	USA	103,436,829
2	UK	4		India		2	China	99,289,086
3	Netherlands	3		Germany		3	India	44,994,097
4	Republic of Korea	2	2	Portugal	9	4	France	38,989,382
	Canada			Spain		5	Germany	38,431,910
	Colombia		3	Australia	8	6	Brazil	37,656,050
	Italy			Canada		7	Japan	33,803,572
5	Lithuania	1	4	Republic of Korea	6	8	Republic of Korea	33,213,160
	Portugal			Brazil		9	Italy	25,893,101
	Spain		5	Lithuania	5	10	UK	24,636,637

(Source: Scopus database) * Data obtained from WHO 2023. WHO Coronavirus (COVID-19) Dashboard. World Health Organization. <https://covid19.who.int/table>, accessed on 7 September 2023.

In the last seven years, the USA contributed 29 publications and was the country with the greatest contribution both before and after COVID-19. This is also the country with the highest number of positive cases (103,436,829), which may explain the interest of researchers there in the topic of teleworking. Similarly, an international study conducted in China, Japan, South Korea, the USA, and the UK found that almost 40% of employees began teleworking upon the outbreak of the pandemic (Belot et al. 2020). However, although the

first outbreak of COVID-19 was in Wuhan, China, and this is the second country with the highest number of infections, it does not have a noteworthy number of publications either before or after the pandemic—having a mere four contributions throughout the entire period studied. Despite being the country with the highest prevalence of teleworking from home (Eurofound 2022) and having been one of the main contributors to the topic before the pandemic, the Netherlands does not appear prominently after the outbreak. The same is seen for the UK. Italy, the European country with the first and most severe outbreak of COVID-19 (in the spring of 2020) and where almost all the increase in remote work during the COVID-19 period occurred in 2020 (Eurofound 2022), contributes to the total with only four articles, three of which are after 2019, and does not make it into the ranking shown in Table 5. Brazil and India should also be noted. Although having no publications in the period before the pandemic, they contributed five and nine articles after 2019, respectively, and are two of the countries with the highest number of COVID-19 infections.

4.1.4. Journals

The 136 articles reviewed were published in 83 journals. Data on journals with at least three publications were collected and compiled Table 6. Nine journals are identified with the corresponding citation value up to the time of data extraction, as well as the classification of three indicators, CiteScore, Scimago journal rank (SJR), and the source normalized impact per paper (SNIP) corresponding to the year 2022. CiteScore is a way of measuring and reporting citation impact, measuring the average number of citations received by a journal (Journal Insights 2023). The SJR is a measure of the journal's influence, prestige, and impact. It expresses the frequency with which content published in a journal has been cited in other journals during the previous three years. The calculation is based on the consideration that citations from more prestigious journals are worth more than citations from less prestigious journals (Journal Insights 2023).

Table 6. Journals with the most publications.

Journal	Total Publications	Number Citations	CiteScore	SJR	SNIP
<i>International Journal of Manpower</i>	14	316	5.8	0.824	1.359
<i>Public Personnel Management</i>	6	93	4.7	1.051	1.495
<i>New Technology, Work and Employment</i>	5	549	7.3	1.669	1.746
<i>Review of Public Personnel Administration</i>	5	166	8.9	2.303	2.961
<i>Journal of Organizational Behavior</i>	4	255	12.4	3.804	3.703
<i>International Journal of Human Resource Management</i>	4	31	10.0	1.571	2.350
<i>Problems and Perspectives in Management</i>	4	20	2.4	0.271	0.586
<i>Administrative Sciences</i>	3	31	3.9	0.530	1.018
<i>Employee Relations</i>	3	52	5.2	0.897	1.490
<i>European Journal of Work and Organizational Psychology</i>	3	64	8.5	1.966	2.380

(Source: Scopus database).

The SNIP indicator reports the number of actual citations recorded concerning the number of citations expected for the topic, allowing the comparison of sources in different areas. In this way, it helps authors to identify which journals perform best in each area (Journal Insights 2023). The *International Journal of Manpower* earns first place in terms of the number of publications ($n = 14$), followed by *Public Personnel Management* ($n = 6$) and two journals with five articles, *New Technology, Work, and Employment* (having the highest number of citations) and the *Review of Public Personnel Administration*. The *Journal of Organizational Behavior*, despite having contributed only four articles, is the one with the best classification in the three indicators presented (CiteScore = 12.4; SJR = 3.804; SNIP = 3.703). Regarding the SJR, it is followed by the *Review of Public Personnel Administration* (SJR = 2.303) and the *European Journal of Work and Organizational Psychology* (SJR = 1.966).

4.1.5. Articles

Figure 4 reports the five most-cited articles (those that were cited at least 100 times). These account for 28.3% of the total number of citations. The table is structured in such a way as to show the name of the article and respective authors, the journal in which it is published, as well as its metric indicators, and the evolution of citations over the years, in descending order to the number of citations. Of the articles published between 2017 and 2019, the most cited is “Assessing the growth of remote working and its consequences for effort, well-being and work-life balance” with 326 citations. The authors A. Felstead and G. Henseke, as mentioned above, are the authors with the highest number of citations, resulting from the publication of this article. Also, the authors A. Nakrošienė, I. Bučiūnienė, and B. Goštautaitė, with just one article, are among the most-cited authors with their publication “Working from home: characteristics and outcomes of telework”, in the second most cited, even the journal in which it appears (*International Journal of Manpower*) does not have the best classifications in the indicators but is the journal that contributed most to the topic. It is worth noting that although T.D. Golden is the second most-cited author, none of his works are found in this table. The journal *Human Relations* contains two of the most-cited articles in this sample and is the journal with the best classification of those in Figure 4. The article “The Benefits of Teleworking in the Public Sector: Reality or Rhetoric?” is also in the ranking of the most-cited publications. Note, too, that all articles saw an increase in their citations from 2020 on, peaking in 2022. This once again points to the growing interest in this subject upon the emergence of the pandemic.

4.2. Content Analysis

We used the ADO framework Figure 5 to synthesize and integrate the information collected from the literature along with factors that lead to various types of positive and negative outcomes.

4.2.1. Antecedents

Antecedents refer to the reasons for engaging or not in a certain behavior and, therefore, can have a direct influence on decisions or an indirect influence on results (Paul and Benito 2018). Antecedents directly explain why a decision is made or not, and indirectly why a result has value or not (Lim and Rasul 2022). In this review, the authors report about six main categories of antecedents of teleworking cited in articles: individual, work, family/domestic life, technology, public health/environment, and social aspects.

Antecedents Associated with the Employee

The antecedents associated with the employee refer to factors or characteristics of individuals that influence the decision to telework. Among them, it was possible to identify three subcategories: sociodemographic factors; behaviors/attitudes associated with work; and personal characteristics/personality traits.

Sociodemographic factors

Factors of age, gender, marital status, level of education, job function/occupation, salary/earnings, ethnicity, and immigration status were identified as antecedents of teleworking. These, in turn, also influence its outcomes. Age is studied by several authors (Arvola et al. 2017; Ha 2022; Hamouche and Parent-Lamarche 2023; Raišienė et al. 2022; Tahlyan et al. 2022) and is found to influence teleworking. Younger and older individuals experienced lower benefits and greater obstacles to telecommuting compared to middle-aged individuals (Tahlyan et al. 2022). On the other hand, (Arvola et al. 2017), consider that teleworking has the potential to delay retirement in senior workers. According to the author (Ha 2022), female, young, highly qualified, and high-paid individuals are more likely to work remotely. Other authors have also studied gender (Custodia de Oliveira 2023; Dávila et al. 2022; Kumar et al. 2023; Pigini and Staffolani 2019; Raišienė et al. 2022; Zhang et al. 2020), level of education (Pigini and Staffolani 2019), and marital status (Dávila et al.

2022; Magnier-Watanabe et al. 2022; Raišienė et al. 2022; Zhang et al. 2020) as antecedents. Regarding occupation/job function, (Ha 2022), found that large companies tend to offer more opportunities for remote work, especially in the ICT, finance, and education sectors. Khan et al. (2017), investigated whether there are differences between teleworking in the public sector compared to the private.

Article	Authors/Year	Journal	Cite Score	SJR	SNIP	Citation	Evolution of Citations																		
Assessing the growth of remote working and its consequences for effort, well-being, and work-life balance	(Felstead and Henseke 2017)	New Technology , Work, and Employment	7.3	1.669	1.746	326	<table><tr><th>Year</th><th>Citations</th></tr><tr><td>2016</td><td>0</td></tr><tr><td>2017</td><td>0</td></tr><tr><td>2018</td><td>2</td></tr><tr><td>2019</td><td>13</td></tr><tr><td>2020</td><td>29</td></tr><tr><td>2021</td><td>88</td></tr><tr><td>2022</td><td>128</td></tr><tr><td>2023</td><td>66</td></tr></table>	Year	Citations	2016	0	2017	0	2018	2	2019	13	2020	29	2021	88	2022	128	2023	66
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2020	29																								
2021	88																								
2022	128																								
2023	66																								
Working from home: characteristics and outcomes of telework	(Nakrošienė et al. 2019)	International Journal of Manpower	5.8	0.824	1.359	190	<table><tr><th>Year</th><th>Citations</th></tr><tr><td>2016</td><td>0</td></tr><tr><td>2017</td><td>0</td></tr><tr><td>2018</td><td>0</td></tr><tr><td>2019</td><td>0</td></tr><tr><td>2020</td><td>12</td></tr><tr><td>2021</td><td>43</td></tr><tr><td>2022</td><td>93</td></tr><tr><td>2023</td><td>43</td></tr></table>	Year	Citations	2016	0	2017	0	2018	0	2019	0	2020	12	2021	43	2022	93	2023	43
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2021	43																								
2022	93																								
2023	43																								
Women's employment patterns after childbirth and the perceived access to and use of flextime and teleworking	(Chung and van der Horst 2018)	Human Relations	10.8	3.508	3.468	120	<table><tr><th>Year</th><th>Citations</th></tr><tr><td>2016</td><td>0</td></tr><tr><td>2017</td><td>0</td></tr><tr><td>2018</td><td>5</td></tr><tr><td>2019</td><td>11</td></tr><tr><td>2020</td><td>23</td></tr><tr><td>2021</td><td>21</td></tr><tr><td>2022</td><td>37</td></tr><tr><td>2023</td><td>23</td></tr></table>	Year	Citations	2016	0	2017	0	2018	5	2019	11	2020	23	2021	21	2022	37	2023	23
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Boundary role transitions: A day-to-day approach to explain the effects of home-based telework on work-to-home conflict and home-to-work conflict	(Delanoeije et al. 2019)	Human Relations	10.9	3.508	3.468	116	<table><tr><th>Year</th><th>Citations</th></tr><tr><td>2016</td><td>0</td></tr><tr><td>2017</td><td>0</td></tr><tr><td>2018</td><td>0</td></tr><tr><td>2019</td><td>1</td></tr><tr><td>2020</td><td>8</td></tr><tr><td>2021</td><td>24</td></tr><tr><td>2022</td><td>56</td></tr><tr><td>2023</td><td>27</td></tr></table>	Year	Citations	2016	0	2017	0	2018	0	2019	1	2020	8	2021	24	2022	56	2023	27
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The Benefits of Teleworking in the Public Sector: Reality or Rhetoric?	(de Vries et al. 2019)	Review of Public Personnel Administration	8.9	2.303	2.961	105	<table><tr><th>Year</th><th>Citations</th></tr><tr><td>2016</td><td>0</td></tr><tr><td>2017</td><td>0</td></tr><tr><td>2018</td><td>0</td></tr><tr><td>2019</td><td>0</td></tr><tr><td>2020</td><td>12</td></tr><tr><td>2021</td><td>24</td></tr><tr><td>2022</td><td>38</td></tr><tr><td>2023</td><td>31</td></tr></table>	Year	Citations	2016	0	2017	0	2018	0	2019	0	2020	12	2021	24	2022	38	2023	31
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Figure 4. Most-cited articles. (Source: Scopus database).

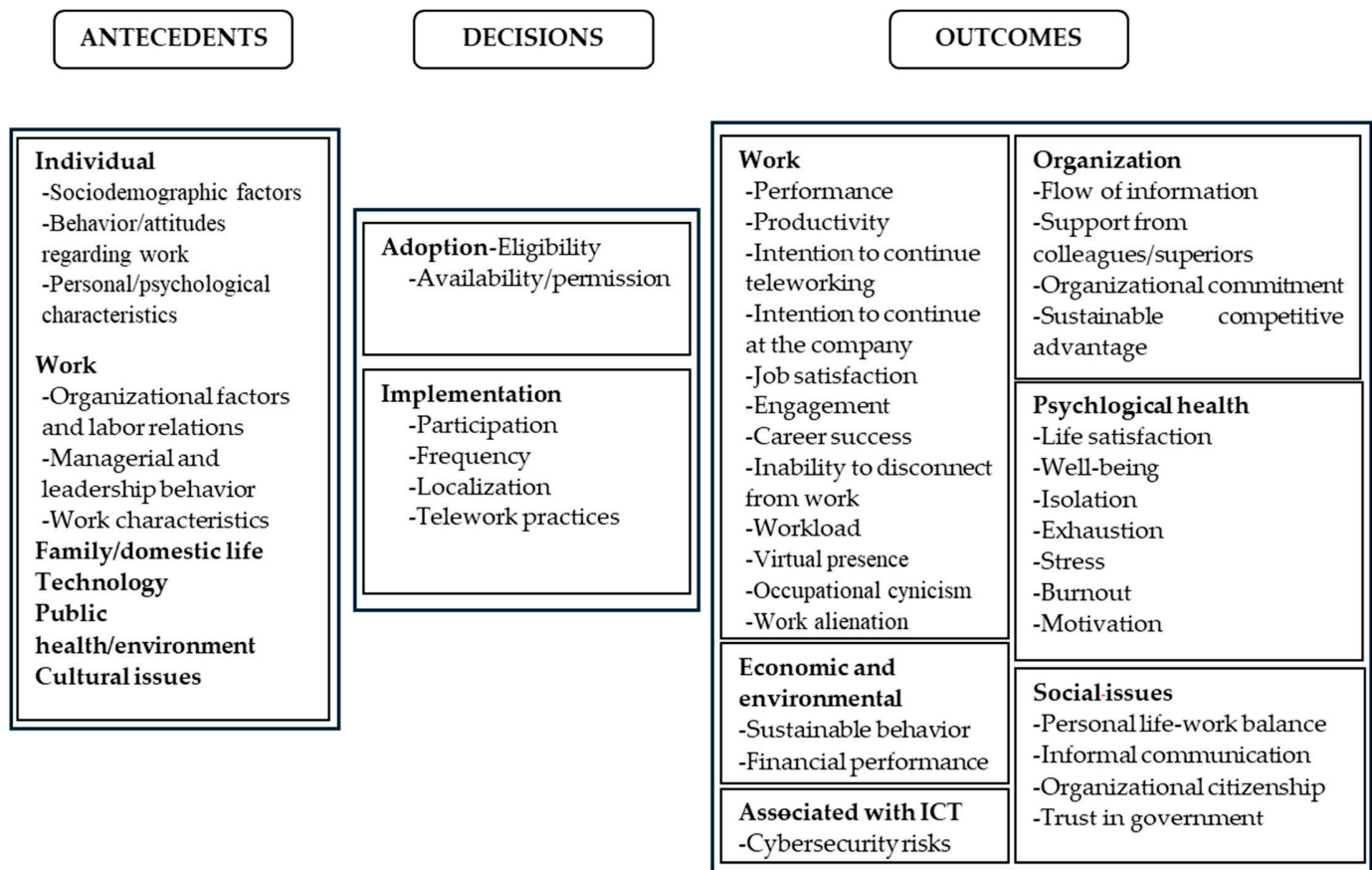


Figure 5. ADO framework for teleworking. (Source: [Paul and Benito 2018](#)).

Only one article studied the ethnicity of workers as a factor that can influence the implementation of teleworking ([Tahlyan et al. 2022](#)). There is also only a single article that addresses the immigration status of workers, that is, whether they are national citizens or foreign employees ([Alassaf et al. 2023](#)).

Behaviors/Attitudes associated with work

These antecedents are associated with characteristics regarding employees' attitudes that may influence teleworking. Previous teleworking experience was studied as one of the factors that might influence eligibility and intention to telework ([Anthonysamy 2022](#); [Labrado Antolín et al. 2022](#)). The ability of employees to adapt to this type of work increases their willingness to become a teleworker ([Lopes et al. 2023](#)). An agile workforce has a direct and positive effect on the success of implementing telework ([Heidt et al. 2022](#)). Our sample includes a study that seeks to identify what drives workers to telework, classifying them into three categories: job requirements ("teleworking because it is necessary"), efficiency ("teleworking to deal with deadlines and pressure"), and work–life balance ("teleworking to have a healthy balance between work and family/leisure") ([Vanderstukken et al. 2022](#)).

Personal/psychological characteristics

Personality characteristics are thoughts and behaviors that shape an individual's interactions. These characteristics can be antecedents to the successful implementation of teleworking ([Doberstein and Charbonneau 2022](#)). The need for routines and relationships ([Kumar et al. 2022](#)), the need for autonomy ([Kumar et al. 2022, 2023](#)), and lifestyles ([Cortés-Pérez et al. 2023](#)) are also considerable antecedents to the adoption of teleworking.

Antecedents Associated with Work

Work-associated antecedents are characteristics and/or features of the work environment that can influence the adoption, implementation, and success of teleworking.

Organizational factors and labor relations

Organizational culture can influence the decision to adopt and implement teleworking, as can interpersonal relationships and support from supervisors, colleagues, and companies. A culture that aligns with the characteristics of teleworking is more likely to enjoy positive results. An example is presented by (Kim 2023; Kwon and Jeon 2020), of a culture based on performance. Some authors also address organizational culture as a distinctive factor in the implementation of teleworking (Díaz-Soloaga and Díaz-Soloaga 2023) and the behavior of teleworkers (Krajcsák and Kozák 2022). Organizational trust has been addressed by some authors due to its importance in crises (Ficapal-Cusi et al. 2023), with trust between workers and managers being crucial to the success of teleworking. If managers support teleworking, employees are likely to feel secure and motivated to become teleworkers (Jaiswal et al. 2022; Vilhelmson and Thulin 2016). Organizational support is also highlighted as playing a significant role in reducing workers' desire to leave the company (Choi 2018). The author also suggests that the level of organizational commitment to teleworking is a crucial factor, as it can influence the physical and psychological experience of teleworking (Choi 2018; Wang et al. 2020).

Behavior/practices of managers and leaders

The behavior and attitudes of managers about teleworking are identified as antecedents that can influence the availability and participation of employees engaged in this form of work.

The leader's commitment to teleworking is an important antecedent for its implementation and success (Kwon and Jeon 2020). Manager support (Bae et al. 2019; Choi 2018; Gan et al. 2022; Jamal et al. 2022; Kumar et al. 2022, 2023; Popaitoon 2023), especially about family matters (Campo et al. 2021; Chambel et al. 2022) has an impact on teleworking outcomes. Special attention has also been directed to support from colleagues, confirming that social support networks should be established before deciding to work from home (Collins et al. 2016). Managers' controlling behavior is also considered an antecedent to the adoption of teleworking (Vilhelmson and Thulin 2016), with results being better when the manager's support is greater than control (Gan et al. 2022). In addition to supportive leadership, management of diversity is important in reducing non-participation in telework among persons eligible and qualified to perform the work (Bae et al. 2019). Performance management positively impacts the implementation of teleworking (Park and Jae 2022).

Conditions/characteristics of the work itself

There are antecedents associated with the characteristics of teleworking in emerging countries, such as Brazil, which affect its implementation and results (Dávila et al. 2022). These authors highlight the intense nature of teleworking, that is, the number of hours working outside the conventional location (Dávila et al. 2022; Golden and Gajendran 2019; Labrado Antolín et al. 2022; Lazauskaite-Zabielske et al. 2022; Park and Jae 2022). The feeling of greater social isolation (Mosquera et al. 2022; Sahai et al. 2022) and work overload (Mosquera et al. 2022) are also considered antecedents that can affect the implementation of teleworking. Belief in the fair distribution of workloads can be important for all employees to think positively about the impact of teleworking on the organization, and it is important to provide similar and/or equal tasks among teleworkers and non-teleworkers to encourage positive perceptions (Park and Jae 2022).

Antecedents Associated with Family/Domestic Aspects

Antecedents associated with family/domestic aspects refer to factors in an employee's family environment that may influence their decision to engage in teleworking or their ability to do it effectively. Some authors included in this review explore these aspects to

understand how they can influence the teleworking experience. One of the factors often discussed is the family structure, namely the presence of dependents, both children (Chung and Van der Horst 2018; Dávila et al. 2022; Laß and Wooden 2023; Pigni and Staffolani 2019; Raišienė et al. 2022; Rieth and Hagemann 2021; Tahlyan et al. 2022; Zhang et al. 2020) and the elderly, who need care (Kumar et al. 2022). One such article highlights teleworkers who live with their parents as having the most positive evaluations of teleworking (Raišienė et al. 2022). Many of these articles relate this antecedent to the outcome of work–family conflict, which is discussed further below. Mayer and Boston (2022), represent the only published research on the conditions of the domestic space, determining that this is an important factor to consider for good implementation, as it has an impact on the ability to work remotely.

Antecedents Associated with Technology

The availability of technological devices (Mayer and Boston 2022; Park and Jae 2022), accessibility to ICT (Kumar et al. 2022; Park and Jae 2022; Vilhelmson and Thulin 2016), including digital literacy (Dávila et al. 2022; Dias et al. 2022), communication via ICT (Park and Jae 2022), and the use of the computer system and its quality (Kuruzovich et al. 2021) are fundamental antecedents of the successful adoption and implementation of teleworking.

Antecedents Associated with Environmental/Public Health

The pandemic catalyzed the widespread acceptance and implementation of teleworking, and because of the restrictive measures imposed, had a profound impact on the way organizations came to be structured. Many of the articles included in the review refer to the outbreak of COVID-19 as a significant antecedent for the adoption and implementation of teleworking (Allassaf et al. 2023; Ameen et al. 2023; Andrade and Lousã 2021; Beño and Křížová 2022; Bodjona et al. 2021; Borkovich and Skovira 2020; Boulet and Parent-Lamarche 2022; Campo et al. 2021; Chambel et al. 2022; Chang et al. 2023; Chênevert et al. 2022; Chi et al. 2021; Čiarnienė et al. 2023; Çoban 2022; Custodia de Oliveira 2023; de Esteban Curiel et al. 2023; Delfino and Van Der Kolk 2021; Díaz-Soloaga and Díaz-Soloaga 2023; Doberstein and Charbonneau 2022; Ficapal-Cusí et al. 2023; Gan et al. 2022; Giauque et al. 2022; Ha 2022; Jaiswal et al. 2022; Jamal et al. 2021, 2023; Kakar et al. 2023; Karácsony 2021; Kim 2023; Kumar et al. 2022; Labrado Antolín et al. 2022; Lazauskaite-Zabielske et al. 2022; Lemos et al. 2020; Li and Li 2022; Lopes Júnior and Daniel 2022; Madureira and Rando 2022; Magnier-Watanabe et al. 2022; Mallett et al. 2020; Mayer and Boston 2022; Miglioretti et al. 2022; Mosquera et al. 2022; Ng et al. 2022; Pirzadeh and Lingard 2021; Popaitoon 2023; Prodanova and Kocarev 2022; Raišienė et al. 2022; Raišienė et al. 2023; Rieth and Hagemann 2021; Rossi and Mc Laren 2022; Sahai et al. 2022; Sandoval-Reyes et al. 2023; Shipman et al. 2023; Tahlyan et al. 2022; Tan and Antonio 2022; Tavares et al. 2020; Varotsis 2022a, 2022b).

Based on interviews with representatives from 22 companies, (Soroui 2021), examines how geographic factors drive the use of remote work by companies, concluding that it is increasingly used as a strategy to overcome regional challenges regarding the acquisition of talent.

Antecedents Associated with Cultural Issues

National-cultural values are the shared beliefs, norms, and attitudes that prevail in a culture or society. These have been studied as possible antecedents to the implementation of teleworking. It was found in a comparison between Spain and Kazakhstan that the same experience had different perceptions among the populations (Díaz-Soloaga and Díaz-Soloaga 2023). Also, Cortés-Pérez et al. (2023), studied cultural values as an important factor in the eligibility of teleworkers in Colombia. Adamovic (2022) focused on two different cultural experiences (“individualism” and “power distance”), concluding that they affect the teleworking experience. Employees with low “power distance” scores and

high “individualism” scores have positive beliefs about the effectiveness of teleworking (Adamovic 2022).

4.2.2. Decisions

Decisions refer to behavioral performance or non-performance and are therefore the direct response to antecedents and a precursor to outcomes (Paul and Benito 2018). After analyzing the articles, it was possible to identify two major decisions: adoption and implementation of teleworking. In terms of the adoption of teleworking, some studies focus on the eligibility of workers and others on the availability and permission for this type of work in organizations. With the implementation of teleworking, they focus on participation, location, frequency, and the practices adopted.

Adoption of Teleworking

Telework eligibility criteria are the requirements that an employee must meet to be considered suitable for telework. The authors (Bae and Kim 2016; Lee and Kim 2018), focused their studies on employees who meet the eligibility requirements and their respective participation. At the same time, there may be factors that influence eligibility and consequently, the probability of adopting teleworking, and some authors focused on those criteria (Cortés-Pérez et al. 2023; Pignini and Staffolani 2019).

Some researchers investigated the decision to provide for and allow teleworking in organizations (Kaplan et al. 2018; Silva-C 2019; Williamson et al. 2022). Williamson et al. (2022), compared data from 2018 to data from mid-2020, focusing on what differed between these two periods concerning decisions about offering this type of work in organizations in Australia. Also, Silva-C (2019), examined the factors that influence managers’ decisions regarding the adoption of teleworking in their companies.

Implementation of Teleworking

When analyzing articles that look at implementation, telecommuting is seen to have different structures. Some studies have paid attention to whether the work was implemented full-time or part-time (Biron and Van Veldhoven 2016; Chung and Van der Horst 2018; Kwon and Kim-Goh 2022; Müller and Niessen 2019; Windeler et al. 2017). Other studies have commented on whether employees’ decision to telework is voluntary or involuntary (Dias et al. 2022; Ha 2022; Huo et al. 2022; Jamal et al. 2022; Lapierre et al. 2016; Lopes et al. 2023). Note that many studies have analyzed the teleworking that was induced by the COVID-19 restrictions, which is one of the strongest antecedents for this type of work, as mentioned above. In some articles, the researchers sought to understand the impact of deciding where to telework, whether at home or in another location outside the office (Aidla et al. 2023; Laß and Wooden 2023; Metselaar et al. 2022; Ollo-López et al. 2020). Other investigations were undertaken to analyze, identify, and characterize organizations’ teleworking practices (Bagley et al. 2021; Delfino and Van Der Kolk 2021; Golden 2021; Günther et al. 2022; Kim et al. 2021; Monroe and Haug 2021; Park and Cho 2022; Rossi and Mc Laren 2022; Tavares et al. 2020).

4.2.3. Outcomes

Outcomes are the consequences arising from behavioral performance or non-performance (Paul and Benito 2018). It was found that one of the major goals of the authors included in the review was to understand the outcomes of teleworking and how antecedents can be determining factors in the success of implementing teleworking. For example, (Campbell and Heales 2016), created a model divided into six areas in which teleworking can affect the employee.

Outcomes Related to Work

Teleworkers’ performance is one of the most studied outcomes and is found to be favorable (Ameen et al. 2023; Jamal et al. 2021; Junça Silva et al. 2022a; Ng et al. 2022; Tan and Antonio 2022; Kwon and Kim-Goh 2022). The higher the frequency of journals that

include telework, the better the performance levels (Golden and Gajendran 2019; Park and Jae 2022), and comparing days spent teleworking and days in the office, the results are better when teleworking (Delanoeije and Verbruggen 2020). However, this may vary throughout the day due to daily interruptions and the isolation felt (Aitken et al. 2023). Trust in the organization and managers (Ficapal-Cusí et al. 2023; Jaiswal et al. 2022; Jamal et al. 2022) and support from superiors (Campo et al. 2021; Jamal et al. 2022) are also highlighted as factors with a positive impact on performance (Ficapal-Cusí et al. 2023). The freedom to organize one's work and collaborate with colleagues was identified as the main feature that positively influences employee performance (Ficapal-Cusí et al. 2023), along with performance management (Park and Jae 2022). However, there are differences between performance when teleworking at home and teleworking elsewhere (Metselaar et al. 2022), as well as when not everyone in the workgroup is teleworking (Podolsky et al. 2022). Performance is also positively linked to the intention to continue teleworking and employee engagement (Ameen et al. 2023). On the other hand, it is also reported that few employees perceive that their performance matters (Lopes Júnior and Daniel 2022) or that it helps them to improve (Varotsis 2022a). As a result of mandatory teleworking from home, performance eroded (Magnier-Watanabe et al. 2022) and the extensive use of teleworking systems also negatively affected this outcome (Kuruzovich et al. 2021). Productivity is seen as a result that can be affected both positively and negatively (Prodanova and Kocarev 2022), as several antecedents can affect it (Chang et al. 2023; Kumar et al. 2023; Labrado Antolín et al. 2022). Employees' intention to continue teleworking does not occur when they are immigrants due to fear of losing their jobs and residence permits (Alassaf et al. 2023). In companies where teleworking is already implemented, this type of work also strengthens employee retention (Choi 2018, 2020; Kakar et al. 2023). On the other hand, some studies report that teleworking increases turnover intentions (Chi et al. 2021; Jamal et al. 2023). Most teleworkers were satisfied with teleworking during the pandemic (Alassaf et al. 2023; Jamal et al. 2021; Karácsony 2021; Magnier-Watanabe et al. 2022), which it was considered to have a positive impact on job satisfaction (Bae and Kim 2016; Kwon and Jeon 2020; Kwon and Kim-Goh 2022; Lee and Kim 2018). On the other hand, according to (Bellmann and Hübler 2020), there are no clear effects in this relationship. de Esteban Curiel et al. (2023), delved deeper into professional satisfaction by creating two profiles of a worker dissatisfied with teleworking in Spain. Some studies have focused on how teleworking can impact professional satisfaction (Bellmann and Hübler 2020; Kim 2023; Tahlyan et al. 2022), and some elements affect it both positively and negatively (Prodanova and Kocarev 2022). For example, satisfaction with telecommuting is greater for middle-aged individuals than for younger and older ones (Tahlyan et al. 2022). There are characteristics of teleworking that can increase or decrease engagement (Popaitoon 2023). When participation is involuntary (Dias et al. 2022) and there is a feeling of work overload and isolation (Mosquera et al. 2022), engagement is negatively affected. Nevertheless, in the studies of (Giauque et al. 2022; De Vries et al. 2019), teleworking forced by the pandemic had no association. On the other hand, telework is considered to have a positive impact (Chi et al. 2021; Masuda et al. 2017; Miglioretti et al. 2021, 2022). Teleworkers report having a greater loss of control over their career success (Rieth and Hagemann 2021) and self-rewarding attitudes (Müller and Niessen 2019). Golden and Eddleston (2020), examine these issues in greater depth by providing a more informed understanding of how there are certain moderating factors in this relationship, namely the intensity of teleworking. Other negative outcomes associated with teleworking are the inability to disconnect from work (Felstead and Henseke 2017), working during free time (Goñi-Legaz et al. 2023), difficulty in establishing boundaries between professional and personal life (Felstead and Henseke 2017; Goñi-Legaz et al. 2023), work overload (Felstead and Henseke 2017; Junça Silva et al. 2022b), virtual (as opposed to in-person) presence (Goñi-Legaz et al. 2023), occupational cynicism (Aidla et al. 2023), and alienation from work (Doberstein and Charbonneau 2022).

Outcomes Related to the Organization

In a study by (Aidla et al. 2023), a comparison was made between the periods before and during the pandemic of distinct types of offices and working from home. Both before and during, those who were working from home felt very well informed about what was happening in their company, expressing values like those of office workers (Aidla et al. 2023). Satisfaction with pre-pandemic information flow was even better at home (Aidla et al. 2023). In terms of relationships with colleagues, the results were similar and relationships with superiors were identical or even better than in some types of offices (Aidla et al. 2023). It is described that when employees choose to telework, they support their colleagues more than when they are forced to work remotely (Huo et al. 2022). Non-teleworking colleagues perceive a less positive impact of teleworking on organizational and individual outcomes (Lee and Gascó-Hernandez 2022). Teleworking has been associated with a reduction in commitment (De Vries et al. 2019; Kuruzovich et al. 2021; Raišienė et al. 2023), but for others, it has a positive impact (Felstead and Henseke 2017; Tan and Antonio 2022). Karia and Abu Hassan Asaari (2016), study teleworking to investigate the factors that drive a sustainable competitive advantage, stating that this is dependent on the company's capacity for innovation.

Outcomes Related to Psychological Health

Campdesuñer et al. (2023), studied not only satisfaction among workers and managers but also investigate family members' perceptions of teleworking. Workers are more satisfied with managers, in most evaluations. In fact, during the pandemic, those who tried teleworking reported greater satisfaction with life, and that their satisfaction was not affected by the presence of children at home (Rieth and Hagemann 2021) or work overload (Mosquera et al. 2022). The feeling of social isolation, in turn, had a negative effect (Mosquera et al. 2022). When comparing remote work and working in different office spaces, before and during the pandemic, the differences in well-being are not noticeable (Aidla et al. 2023). When studying the psychological well-being of managers at the beginning of the pandemic, it was found that there was a decrease in well-being and an increase in stress at work (Sandoval-Reyes et al. 2023). Teleworking during the pandemic negatively affected the well-being of workers (Pirzadeh and Lingard 2021; Raišienė et al. 2022; Raišienė et al. 2023), especially men (Raišienė et al. 2022), and when there were dependent elderly persons (Kumar et al. 2022). On the other hand, other authors indicate that these factors had a positive effect (Boulet and Parent-Lamarche 2022; Felstead and Henseke 2017; Junça Silva et al. 2022b), or even that there was no relationship (Arvola et al. 2017; Misra et al. 2022). Charalampous et al. (2022), mention the value of a multidimensional approach to understanding the well-being of remote workers. A higher quality of teleworking is associated with greater well-being (Miglioretti et al. 2022), and supervisor support also has a positive effect (Chambel et al. 2022; Kumar et al. 2022). Having dependent children, age, and gender greatly affects workers' health (Raišienė et al. 2022). The mental health problems caused by teleworking are also addressed (Sahai et al. 2022; Wöhrmann and Ebner 2021). Teleworking is associated with greater employee exhaustion (Jamal et al. 2021), both physical and mental (Raišienė et al. 2023). The authors state that when this is involuntary its effect is negative (Dias et al. 2022; Lopes et al. 2023). However, when forced by the pandemic, it had a positive association (Giauque et al. 2022). Perhaps the intensity of teleworking is a factor to consider for mitigating this outcome (Windeler et al. 2017).

Although teleworking is not a predictor of burnout, teleworkers feel more absorbed in their work, which does influence burnout (Chi et al. 2021), as does a heavier workload (Jamal et al. 2023). Other drawbacks of teleworking include isolation (De Vries et al. 2019; Raišienė et al. 2023; Shipman et al. 2023; Spilker and Breaugh 2021; Wang et al. 2020) and increased stress (Jamal et al. 2021; Li and Li 2022; Popaitoon 2023; Shipman et al. 2023). According to (Goñi-Legaz et al. 2023), this is especially due to the increase in their work outside normal working hours. On the other hand, when comparing teleworkers with non-teleworkers, the latter are reported to suffer more stress (Rieth and Hagemann 2021).

Part-time teleworkers show lower stress when working (Delanoeije and Verbruggen 2020). One study reports higher levels of motivation among teleworkers (Caillier 2016). There was a fall in all quality-of-life indicators during lockdown. The erosion was driven mainly not by the lack of previous experience in teleworking, but rather by a combination of three factors: having young children at home, having a high frequency of teleworking, and being a man (Chênevert et al. 2022).

Outcomes Related to Social Issues

Teleworking, and more specifically working from home, can be useful for achieving a satisfactory balance between personal and professional life (Delanoeije and Verbruggen 2020; Metselaar et al. 2022). According to some authors, teleworking has a positive effect on work–family conflict (Jamal et al. 2021; Laß and Wooden 2023; Magnier-Watanabe et al. 2022), especially when employees feel the support of their superiors in this regard (Chambel et al. 2022). Working remotely is more beneficial for mothers than for fathers (Laß and Wooden 2023). On the other hand, at least one study reports that teleworking has no influence, either positive or negative, on work–family conflict (Campo et al. 2021). Others report that working from home violates the boundaries between professional and home life (Bellmann and Hübler 2020; Eddleston and Mulki 2017; Lapierre et al. 2016; Li and Li 2022; Palumbo et al. 2022; Varotsis 2022b). In a study carried out among women of Turkish nationality, work–life balance was affected in the pandemic, as women’s traditional domestic roles became centralized (Çoban 2022). On the contrary, in a study with Brazilian women, the respondents reported that despite the work overload they felt no worsening in their work–family balance, even stating that they gained more time for their leisure and family activities (Lemos et al. 2020). Custodia de Oliveira believes that other dimensions of domestic life must be considered when teleworking, the most affected being leisure, family, and education (Custodia de Oliveira 2023). Some researchers indicate that teleworking has a negative influence on informal communication and interpersonal conflicts (Viererbl et al. 2022; Li and Li 2022), and that working from home, depending on the company’s organizational culture, influences organizational citizenship behavior (Krajcsák and Kozák 2022). During pandemic-induced teleworking, it was also found that trust in the government was greater among teleworkers than among those who did not have this possibility (Rieth and Hagemann 2021).

Outcomes Related to Economic and Environmental Behaviors

Čiarnienė et al. (2023), focused on teleworking as a facilitator of sustainability behaviors at an economic and environmental level. They state that in the context of the pandemic and with forced teleworking, there was a reduction in travel and shopping trips, thereby reducing costs associated with transportation, food, clothing, and beauty services (Čiarnienė et al. 2023). In turn, there was better access to healthy food and better opportunities for professional development (Čiarnienė et al. 2023). On the other hand, employees experienced increased costs in energy consumption, heating systems, medication, and greater amounts of household waste (Čiarnienė et al. 2023). During the pandemic, teleworking also had a positive impact on companies perceived financial performance (Bodjona et al. 2021).

Outcomes Related to ICT

Only a single article addresses cybersecurity problems that occur when telecommuting. The authors make recommendations to reduce and mitigate these issues (Borkovich and Skovira 2020).

4.2.4. Conclusions Drawn from the ADO Framework, and Future Directions

The content analysis shows that most studies addressed the antecedents and outcomes related to teleworking. Teleworking decisions can be divided into studies focused on adoption and its criteria and on the implementation itself and the factors that can

influence its impact. Based on the ADO framework, we present conclusions and future recommendations for each dimension.

Antecedents

In the studies included in the review, several antecedents associated with individual and organizational factors that influence the decision to telework are highlighted.

The COVID-19 pandemic appears as a crucial trigger for the widespread adoption and implementation of teleworking. The measures imposed during this period forced a change in the work structure of organizations, with the COVID-19 virus acting as a catalyst for the acceptance of this type of work.

Sociodemographic Factors and Inequalities

The study of sociodemographic factors as antecedents to teleworking may be important to understanding inequalities in remote-work opportunities. Understanding how age, gender, education level, and salary/earnings, for example, can be decisive for the implementation of teleworking will help in the promotion of equitable teleworking policies and provision of the support needed by distinct groups of workers. The paucity of studies on the effects of ethnicity and immigration status on teleworking point to an area that could benefit from additional attention.

Individual Characteristics and Behaviors

Investigating how these factors intersect with other sociodemographic characteristics and impact teleworking experiences can contribute to a more inclusive approach to labor. Exploring worker characteristics, behaviors, and attitudes can provide insights into the drivers and barriers to telework adoption. Each worker has her/his personality and way of working, so it is important to take these individual differences into account when deciding to implement this type of work.

Organizational Support and Culture

Understanding how features related to home life can be drivers for greater participation in teleworking can offer insights to companies. Exploring strategies to support teleworkers with dependents and how organizations can provide resources to contribute to a calmer remote-work environment are valuable goals for future studies. One such support strategy would be to ensure that teleworkers have the necessary technology and ICT proficiency to function well. It is thus important for organizations to provide training in this area to optimize their teleworking experiences. It would be interesting in future research to investigate obstacles to technological accessibility for different demographic groups, as well as to conduct studies to evaluate the effectiveness of digital literacy training programs in the implementation and success of teleworking. Likewise, identifying the best virtual communication practices would be valuable in improving collaboration and teamwork. The study comparing Spain and Kazakhstan (Díaz-Soloaga and Díaz-Soloaga 2023) reveals the importance of considering cultural differences when examining the issues related to teleworking. Embracing cultural diversity and implementing inclusive telecommuting practices makes it easier for organizations to leverage the strengths and talents of employees from diverse cultural backgrounds. The importance of organizational culture as an antecedent highlight the need for organizations to promote a culture that supports remote work if they wish to employ it. Companies should also focus on building trust between managers and workers. These can be definitive factors for the implementation of teleworking, making it important to examine the strategies necessary to transform and create a culture favorable to this type of work.

Leadership and Managerial Support

Organizations must prioritize the support of managers and leadership to ensure the success of teleworking. Some studies included in this review already focus on the practices adopted by managers, which is an essential element of research to understand how this antecedent can make a positive contribution.

Aligning Work Structures with Telework Characteristics

The antecedents associated with the characteristics of the work itself play a crucial role in shaping telework outcomes. Companies must recognize the importance of aligning their work structures with the characteristics of teleworking to facilitate its implementation. Dealing in advance with predictable (and potential) problems, such as social isolation, is essential for teleworking to be effective. Providing opportunities for virtual types of social interaction can mitigate the drawback of isolation.

Identifying the antecedents of teleworking helps managers adapt their business models and work structure to achieve company sustainability (Dávila et al. 2022).

Decisions

For the “D element” in the ADO framework, studies focus on both the adoption of teleworking and on its implementation and the practices inherent to that implementation. Few studies focus on understanding the relationship between eligibility criteria and the adoption of teleworking. Note that not all eligible employees use teleworking, which suggests that factors beyond the eligibility criteria may influence their decision. Therefore, it would be interesting for future investigations to adopt a holistic approach, examining various individual, organizational, and environmental factors that may affect the adoption of this type of work.

Organizational Decision-Making and Policies

Decisions made by organizations to offer the option of teleworking are also examined. Williamson et al. (2022), investigated how these decisions evolve, especially in response to events such as the COVID-19 pandemic. The focus on these decisions highlights the importance of organizational culture and policies in the adoption of teleworking. It is important, then, to learn more about which organizational factors can facilitate or hinder the adoption of teleworking, including the technological infrastructure itself, communication tools, and support from managers, for example.

Variability and Best Practices in Telework Implementation

Teleworking is a multifaceted concept, and the literature reflects various perspectives on how it can be implemented, whether it is carried out at home or elsewhere, whether participation is voluntary or involuntary, and whether it is full-time or part-time. Studies focused on the policies of organizations can help to identify the best practices that contribute to successful teleworking. Before deciding to adopt and implement teleworking, organizations must create policies that meet the unique needs of their employees (Günther et al. 2022).

It is important to highlight that the COVID-19 pandemic was a significant factor in the adoption and implementation of teleworking, as mentioned above. The event triggered a surge of studies regarding teleworking that was imposed by lockdown restrictions. It would be interesting to continue investigating the consequences of pandemic-induced changes in work structures and how work trends have evolved in the post-pandemic period, to provide insights into their long-term sustainability.

Outcomes

Our review reveals that the dimension of outcomes is an area widely explored by researchers. Understanding outcomes helps organizations adapt their strategies to maximize the benefits of teleworking and reduce its disadvantages. In general, the outcomes have contradictory results, which demonstrates the complexity of studying the issue of teleworking. Performance and productivity have a positive association with teleworking, but when this was forced by the pandemic, the impact reported was negative. Understanding how teleworking affects these outcomes is important, as it provides companies with data on the implementation of this type of work, allowing them to optimize the work of employees, that is, determining which functions or tasks are suitable for teleworking and which can be more effective when carried out in the office workspace.

Employee Satisfaction and Well-being

Understanding whether employees are satisfied with teleworking and whether they intend to continue it is essential to achieve a good allocation of resources. Different employees have varying needs and preferences, so companies need to know these to enhance their work experience. The organization should therefore focus on retention strategies that meet remote work preferences, including providing continuous professional development possibilities, guidance, and growth opportunities so that workers feel control over the success of their careers. [Campdesuñer et al. \(2023\)](#), suggest that teleworking positively influences the general satisfaction levels of workers, managers, and family members. This highlights the need to adopt a holistic view of satisfaction that encompasses multiple stakeholders. It will be important to explore the specific factors that contribute to family satisfaction and how organizations can improve the overall well-being of employees and families. Understanding the connection between the employee and the company, even when workers are not in the office, is important for companies to ensure that their employees remain motivated and committed to the organization.

Communication and Innovation

Some findings such as those reported by ([Aidla et al. 2023](#)), challenge the assumption that remote work makes communication difficult. Future investigations can delve deeper into the mechanisms that enable communication flow by exploring enabling technology and communication strategies. The study by ([Karia and Abu Hassan Asaari 2016](#)), opens avenues for future investigations to explore the interaction between teleworking and innovation. Understanding how teleworking affects an organization's capacity for innovation can contribute to a deeper understanding of how this type of work influences long-term organizational success.

Balancing Work and Personal Life

Analysis of various outcomes related to teleworking demonstrates the complex interaction between work, personal life, well-being, and health. The pandemic context adds a layer of complexity, with some employees reporting greater well-being while others experienced greater stress. The study of teleworking raises the issue of balance between professional and personal life. The duality regarding the impact of teleworking in this dimension once again highlights the importance of considering cultural factors, individual preferences, and work characteristics. It is important to further explore the moderating mechanisms of this relationship, notably the interventions that mitigate negative effects and promote positive interactions between family and teleworking. The study by ([Custodia de Oliveira 2023](#)), highlights the need not to neglect other dimensions of domestic life that can be impacted by teleworking beyond the family.

Social and Environmental Impacts

Trust in the government and its relationship with teleworking during the pandemic highlights the social impact and the need not to look at teleworking solely from an organizational perspective. The government can play a key role in increasing the prevalence of this type of work. There are not many published articles that focus on the economic and/or environmental impacts of teleworking. Our findings reinforce the importance of considering teleworking as a strategy to promote sustainability. Therefore, it would be interesting for future studies to explore these themes in the long term. The limited exploration of cybersecurity issues is another weakness detected in the literature. The only article that addresses this topic ([Borkovich and Skovira 2020](#)) raises the possibility of future investigations in this area. As organizations become more dependent on technologies, vulnerabilities and threats to IT security become more pronounced, especially when there is remote access. Investigating the type of computer threats, and factors that contribute to susceptibility to computer attacks, and creating organizational practices that increase the preparation of remote employees for these risks to create a safe remote-work environment are thus essential.

5. Conclusions

This investigation is a systematic review of the literature about studies on teleworking. Teleworking undoubtedly occupies an important position in the current work structure as a flexible and resilient alternative to traditional modes of working. A total of 136 articles were analyzed and their data were classified according to the length and coverage of the articles, antecedents, decisions, and outcomes. Through the bibliometric analysis performed, it was possible to see that the COVID-19 pandemic not only played a key role in the global adoption of teleworking but also led to an exponential emergence of studies on this type of work. This analysis also contributes to the identification of the most influential authors and journals, which will guide new researchers to know the best partnerships or which journal will publish their study. Regarding the limitations of this review, the data gathered are comprehensive but not exhaustive. As mentioned in the methodology section, only one database was selected for selecting and collecting articles (Scopus). Including another would improve the robustness of the findings. Separating the antecedents and outcomes of teleworking can be challenging due to the relationships that may exist. This separation derives from a detailed reading of the literature, which may be subject to some bias due to the authors' interpretations. Another limitation of the study lies in its exclusion of non-English articles from the comparison of countries, potentially biasing the findings about teleworking at a country or continent level. Authors should approach their findings more critically, recognizing that they may not fully represent the global discussion on telework before and after the pandemic. Regarding theory, our investigation offers a more comprehensive understanding of the evolution of the literature on teleworking from 2016 on, as well as a structuring of the topics covered. The ADO framework provides a comprehensive lens through which to analyze the antecedents, decisions, and outcomes related to teleworking. The antecedents encompass a wide array of individual, organizational, and sociodemographic factors, with the COVID-19 pandemic acting as a significant catalyst for widespread adoption. Understanding these antecedents is crucial for crafting inclusive teleworking policies and ensuring equitable access to remote-work opportunities. Organizations must carefully consider eligibility criteria, technological infrastructure, and managerial support to facilitate successful teleworking arrangements. Additionally, as teleworking continues to evolve, it becomes imperative to conduct continuous research to identify and implement best practices while adjusting policies accordingly. While teleworking can positively impact various stakeholders, the pandemic-induced shift has also revealed challenges such as communication barriers and cybersecurity vulnerabilities. Future investigations should delve deeper into these complexities to optimize teleworking experiences and ensure long-term sustainability and organizational success. Overall, the findings underscore the importance of holistic approaches to teleworking, considering its implications for individuals, organizations, and society at large. By addressing antecedents, making informed decisions, and monitoring outcomes, stakeholders can navigate the evolving landscape of remote work effectively and responsibly. This work can be a useful tool for future researchers to position their studies by working on the gaps identified. In terms of practical contributions, this research can help managers, workers, and colleagues to identify the positive aspects of teleworking to promote them, and the negative ones to avoid or mitigate them. This work can raise awareness among organizations about the challenges arising from the adoption and implementation of teleworking. Short-term telecommuting during specific circumstances, such as a pandemic, may have different results compared to long-term telecommuting arrangements. Given this, it is necessary to recognize that teleworking is not a "one-size-fits-all" strategy, and each company needs to know the diversity of its workforce and adapt its policies and practices to meet individual differences and promote a more inclusive and supportive environment for remote working. Teleworking, which at one time failed to live up to projections of being the "work of the future", is expected to be explored by companies as a viable opportunity for workers in the post-COVID-19 era. The challenge today will be to understand whether this continues to be a sustainable long-term strategy for organizations and employees.

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