



Occupational Stress, Working from Home, and Job Sustainability: Another Gender Issue?

Stefania Capecchi¹ · Francesca Di Iorio¹ · Nunzia Nappo¹

Accepted: 7 June 2024
© The Author(s) 2024

Abstract

Aim of the paper is to analyse the occurrence of occupational stress across European Union countries, considering gender and job sustainability as determinants, with a specific attention to the effects of home-based work. Although COVID-19 pandemic has brought such issues into a novel spotlight, to detect the response pattern towards occupational stress we chose to employ the latest official data collected by the Sixth European Working Condition Survey developed and carried out in a pre-COVID-19 scenario. This information may provide a reliable picture of working conditions, which are likely to become the “new normal” across Europe, at least for a subset of workers. Descriptive analyses do not seem to help disclosing any different response behaviour with specific respect to reported stress by gender, even when combined with the condition of working from home. Whereas a noteworthy finding of our study is that results from the implemented ordered probit model display that some differences in the response pattern do exist and are even substantial. A question still arises about whether and to what extent hybrid forms of work are here to stay and even to grow in the post-pandemic period. Some of the critical features of teleworking-from-home emerged during the epidemic indicate that the implementation of policies at a national and, ideally, even supra-national level is clearly necessary. However, since both occupations and company organizations are strongly differentiated, it seems also that the enterprises are allowed some flexibility in defining corporate policies for teleworking practices, especially aiming at providing workers with improved and more sustainable working conditions, such as a less distressing environment and more supportive managerial styles.

Keywords Work related stress · Sustainable work · Home-based work · Ordered probit model · Working conditions · EU countries

✉ Francesca Di Iorio
fdiiorio@unina.it

Stefania Capecchi
stefania.capecchi@unina.it

Nunzia Nappo
nunzia.nappo@unina.it

¹ Department of Political Sciences, University of Naples Federico II, Naples, Italy

1 Introduction

The aim of the paper is to analyse the experience of occupational stress across European Union (EU) countries from a gender perspective, with a specific attention to workers' perceived job sustainability. The study also takes into account the self-reported stress of those who work from home.

As a matter of fact, growing attention towards the targets of “decent job conditions for all” and work sustainability has been observed in recent years in pursuing the Goal 8 of the universal call to action of the “Sustainable Development Goals” (United Nations General Assembly, 2015): “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”. Furthermore, the updated ILO's Declaration on Fundamental Principles and Rights at Work explicitly refers to the principle of “a safe and healthy working environment” (ILO, 2022), leading the path to less-explored research topics beforehand.

Eurofound (2015, p. 5) defines as “sustainable work” the interplay of working and living conditions “such that they support people in engaging and remaining in work throughout an extended working life”. This definition implies simultaneous efforts in achieving individual, social and economic goals that will enable the workers' needs in the present to be met without compromising their ability to work in the future. To achieve these results, a combination of sustainable conditions in a worker's current job is required: i.e. workers' skills, sufficient income, a good social climate at work, willingness, and motivation to do a given job now and in the future, and ability to balance work-related and individual responsibilities. A complex and bidirectional relationship arises, workers' health being a precondition for sustainable working conditions.

As well-known, the pandemic has brought the issue of new and emerging risks at work into a novel spotlight (EU-OSHA, 2021a). Before 2020, the research on working conditions and on psychosocial and physical risks at work did not address problems related to new forms of job (such as those experienced by home-based workers, platform workers and teleworkers), given their scant relevance on the labour force (Eurofound and the International Labour Organization, 2017; Messenger, 2019; European Commission, 2020; Urzi Brancati et al., 2020). Figures from the European Labour Force Survey show that in 2019 just 5.3% of the employed people at the EU level¹ report to work “usually” from home. When also considering respondents who “occasionally” work from home, these figures rise to about 11% of the total employment (Eurostat, 2022, dataset: *lfsa_ehomp*). Then, abruptly, during the COVID-19 pandemic, home-based teleworking has been universally advocated as an effective way to reinstate and safeguard the functioning of entire sectors (2021b; EU-OSHA, 2021a). In fact, the percentage of people usually working from home climbed to 12% on average at the European level (Eurostat, 2022, dataset: *lfsa_ehomp*), with the proportion of self-employed people² regularly working from home being higher than that of the employees. As pointed out by Countouris et al. (2023)

¹ In this study we will refer to the EU at 28-country level, unless otherwise specified.

² This is likely due to the fact that autonomous workers may benefit from a large degree of independence in organising their working time and job tasks (Cortés Aguilar et al., 2013). See Table 3 reported in the “Appendix” for a cross-country comparison. In 2019, among the EU countries, the highest frequencies of self-employed usually working from home are observed in Finland (about 44.8% of the reference population), closely followed by the Netherlands (almost 43%) and Austria (42.2%).

Source: Eurostat *lfsa_ehomp* dataset, https://ec.europa.eu/eurostat/databrowser/view/lfsa_ehomp/default/table?lang=en.

novel forms of hybrid work practises, referring to a diverse combination of both telework and on-site work, are emerging as a customary approach. Such arrangements are currently implemented by means of company and/or individual level agreements, in a variety of forms and with considerable differences across countries (see, among others: Eurofound, 2022a; Countouris et al., 2023). Hence, it becomes increasingly urgent to investigate in more detail the sustainability aspects and the specific risks features occurring with these new forms of work organization (EU-OSHA, 2023).

A flourishing of research on the occupational well-being of home-based workers can be observed from 2020 onwards, though mostly based on ad hoc observational studies (Eurofound, 2022b; European Parliament, 2021). The diversity of the studies carried out highlights the complexity of the phenomena under examination (among others, see Fana et al., 2020; EU-OSHA, 2021a, 2021b; Fan & Moen, 2022; Matthews et al., 2022). As pointed out by Arcagni et al. (2021), social sustainability and the effectiveness of public and private policies to promote (individual and collective) well-being are complex processes, which involve numerous dimensions and components widely interrelated and challenging to measure.

Moving from the above caveats, in this study we analyse the self-reported occupational stress using the European Working Conditions Survey (EWCS), which is one of the primary sources for analysing working conditions across EU. Alas, the 2020 wave of the survey was interrupted due to the pandemic. Therefore, we employ the latest official data collected by the sixth EWCS, carried out in 2015 by the European Foundation for the Improvement of Living and Working Conditions and released in 2017 (Eurofound,). Developed and implemented in a pre-COVID-19 scenario, the sixth EWCS can provide an accurate and reliable picture of hybrid working conditions, which are likely to become a “new normal” across the EU, at least for a subset of workers (European EU-OSHA, 2021a; Parliament, 2021). In the subsequent European Working Condition Telephone Survey (EWCTS), conducted during 2021, the continuity and comparability of the results, not statistically representative at EU and country level, are altered. Therefore, for our purposes, the sixth edition of the EWCS remains the most suitable source at the European level.

Taking into account the nature of the variables of interest, most of which are self-reported aspects measured on Likert scales (see, among others, Liddell & Kruschke, 2018), to conduct our analyses we employ a heteroskedastic Ordered Probit Model (Agresti, 2010; Tutz, 2012). Our goal is to disentangle both the effect of individual work-related features, such as working hours, working from home and job sustainability over time, alongside the usual socio-demographics variables.

To the best of our knowledge, this is one of the few analyses considering all the above-mentioned determinants as occupational stress drivers, especially when stemming from a non-observational study. Also, this research contributes to the extensive literature on occupational stress making a step further: its novel contribution relies in the study of the association between occupational stress and job sustainability from a gender perspective, considering the circumstance of working from home. In addition, while some literature refers mostly to self-employed respondents to study working from home issues (Messenger, 2019), we also consider the employees to better understand current and future challenges linked to this “new normal” situation. The study encompasses a very large group of countries (EU28), therefore presenting a broad account of the impact of job sustainability and working from home on occupational stress across Europe.

Our findings suggest that some individual and work-related characteristics are clearly associated to occupational stress since different response behaviours do emerge from the empirical analysis. As a matter of fact, the pandemic has induced an unforeseen

modification in work organization in most sectors. However, it is still unpredictable how and when a return to a to pre-pandemic “normality” would be observed (Alon et al., 2020). Therefore, it should be a policy priority to take into consideration which circumstances and work environments are most likely to lead to decent, fruitful, and sustainable job settings, also with respect to home-based condition.

The paper is organised as follows. Next Section reviews the main literature on work-related stress, outlining a theoretical framework with respect to stress determinants in a gender perspective. Section 3 focuses on employed data and variables selected for the modelling analysis. In Sect. 4 the empirical findings are illustrated and discussed, presenting the adopted modelling approach to analyse different response patterns. Some concluding remarks end the paper.

2 Setting the Scene: Job Sustainability and Occupational Stress Determinants

According to Eurofound (2015), higher life expectancy and low fertility rate have been changing the European age structure in a way that the sustainability of welfare states and social protection systems may be prejudiced. This means that making work sustainable over the life course should be a priority at a global level, in a social sustainability perspective. As pointed out by Conigliaro (2021, p. 142), in trying to achieve social sustainability, a good job quality is likely to produce a good working life, balancing the individual “right to pursue personal fulfilment and to be protected as a human being (in every aspect of an individual’s need) with the collective well-being, safeguarding interest, cultures, rules and religions of communities. These characteristics perfectly fit with the concept of decent work.”

Work sustainability is a multifaceted concept itself: “The work has to add value for both the individual and the organization in order to be sustainable” (De Vos et al., 2016, p. 19). In 2012, the World Economic Forum started working towards the goal of improving health and well-being through the Workplace Wellness Alliance, with the purpose of a collaborative effort to make the impact of workplace wellness (which is a steppingstone for sustainability) measurable on a global scale. A sustainable job is oriented towards the individual’s long-term employability in a position likely to promote the worker’s personal development over time (Lawrence et al., 2017). Moreover, a shared responsibility between individuals and organizations where they work is needed to pursue job sustainability (Hite & McDonald, 2020). According to De Vos et al. (2016), both employability and workability characterize sustainable work: the first requires supporting individuals to invest in their skills; the latter means to protect the individuals’ physical, psychological, and social ability to work by avoiding their burnout in the long term.

Most of previous research focuses on the factors and actions which make work sustainable throughout the working life at the individual level. Hartley et al. (1990) highlight the effects of job insecurity on increased occupational stress, therefore leading to less sustainable jobs. Herman and Lewis (2012) investigate the issue of sustainable careers for mothers, whereas Baldrige and Kulkarni (2017) explore the role of disability. Kossek et al. (2014) examine the relationship between sustainable job and work-life balance in general. The improvement of job quality for sustainable work over the life course was analyzed in Eurofound (2015) considering the psychosocial risk factors: such

risks encompass work intensity, quantitative and qualitative job insecurity, low autonomy, exclusion from decision making process, and poor social relationships at work.

According to the World Health Organization (2020), “Work-related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope”. Essentially, people spend an important part of their lives on the job, therefore working conditions, job environment and its characteristics inevitably produce substantial consequences on both physical and psychological health (Fletcher et al., 2011).

Employees’ well-being is of course crucial for their quality of life (EU-OSHA, 2021b; Helliwell et al., 2021), yet it is substantial for the efficiency of companies as well. Satisfied and not stressed workers are indeed a fruitful resource for improving organizations’ performance. On the contrary, workers dealing with stressing environment tend to display higher rates of absenteeism and quitting intentions, with subsequent undesirable effects also for the employers (Vignoli et al., 2016; Yaniv, 1995; Yunus & Mostafa, 2021, among others). Occupational stress is a deeply scrutinized topic also due to the associated financial costs at both company and country level. As an instance, within the EU15 countries, costs related to occupational stress were estimated at 26.47 billion of Euros in 2014 (Hassard et al., 2018).

Although nearly all the research on occupational stress and workers’ well-being is cross-sectional and mostly based on non-representative samples (Sarracino and O’Connor, 2022), the World Happiness Report (Helliwell et al., 2021) comprises a large set of countries employing representative data.

In the aftermath of the COVID-19 pandemic, work-related stress has become even more relevant when taking gender and parenting into account (Dunatchik et al., 2021, among others).

2.1 Drivers of Work-Related Stress

The debate on the determinants of stress and on its impacts is far from being over. Starting from the seminal work of Karasek (1979), who outlined the “job demand-control model”, it is nowadays recognised that occupations implying high demand and low control (restricted possibilities to schedule one’s own duties and to manage one’s skills) are associated with high degrees of reported stress (Smith, 2000). Karasek and Theorell (1990) added to the model the “social support” feature, highlighting that the cooperation and collaboration with both supervisors and co-workers are likely to buffer the negative effects derived from high demands and low control.

As a matter of fact, contemporary and rapid transformations within the global labour markets seem to generate additional work-related stressors, especially for the novel work typologies, which are most likely to foster job insecurity and associated stress. For more skilled workers and professionals, it should be also thoroughly considered the impact of new and emerging risks on their stress experience. Since automation and digitalization are pervasive in everyday life of skilled workers, recent research have been devoted to strategies towards inclusive and resilient recovery actions, in a human-centred perspective, even reflecting the “decent job” sustainable development goal (ILO, 2021, 2022).

Other risk factors may be identified in some environmental job aspects, such as heavy mental loads, lack of autonomy and of support from supervisors and colleagues and scarce appreciation for work carried out (see also Alcover et al., 2020). Isolation and lack of beneficial interpersonal relations with colleagues and supervisors, which may

help to lighten stressful working conditions, can also be a consequence of digitalization and working from home practice (among the early studies on this topic, see McKenzie et al., 2002). According to recent studies on psychosocial risk factors at work across European countries (2021b; Capecchi et al., 2023; EU-OSHA, 2013, 2021a), about 25% of workers report occupational stress at least “most of the time”. A similar proportion claim that their jobs may negatively affect their health.

2.2 Work Related Stress: A Gender Perspective

In such a widespread debate, the influence of individual characteristics seems undisputed, while being far from a unanimous consensus. Gender is indeed one of the most significant variables on whose effects studies have displayed non-univocal findings.

Gyllensten and Palmer (2005) provide a review of the literature on the role of gender on workplace stress. Authors consider a variety of research designs without restrictions on the occupations of the participants. Their findings are inconclusive, with some studies showing no difference by gender, although some research seem to suggest a larger incidence of stress as reported by women. Results turn to be inconsistent also for the adverse effects of multiple roles played by female workers, lack of career progress and discrimination, with respect to gender specific stressors. As reported by Russell et al., (2018, p. 7), who state that in the UK women are more likely to experience job stress than men, “studies examining whether specific stressors have a different effect on outcomes for men and women are rare”.

On the other hand, some scholars disclose that occupational stress does appear with different response patterns by gender (among others, see Russell et al., 2018; Klapproth et al., 2020; Nappo, 2020). In addition, it seems that men and women experience different sources of stress on the job, even adopting diverse coping strategies (Gianakos, 2000; Goubet & Chrysikou, 2019; Klapproth et al., 2020).

A strand of the literature suggests that women encounter gender-specific stress determinants, such as discrimination on the grounds of sex, stereotyping, social isolation, sexual harassment, and difficulties in conciliating work with private and family duties (Krantz & Lundberg, 2006; Sharma et al., 2021). Furthermore, taking care of children and elderly relatives is likely to be a cause of job stress for employed women as well (Vasumathi, 2018, among others).

With respect to job insecurity, which is one the key determinants of occupational stress (Hartley et al., 1990), some studies (Gaunt & Benjamin, 2007; Rivera-Torres et al., 2013) report that such condition is more stressing for men, whereas other analyses show the contrary (among others, see Steptoe & Willemssen, 2004). Others find that job insecurity is as important for men as for women (see, for instance, Padkapayeva et al., 2018).

Social support, as a moderator of work-related stress, turns out to be more significant for women than for men (Rivera-Torres et al., 2013; Sanne et al., 2005). Specifically, Padkapayeva et al. (2018) claim that higher levels of support at work, when provided by supervisor, are related with lower work stress, although only among women. The importance of social support for women can be explained considering that female respondents seem more concerned with the intrinsic aspects of job, while men seem

to be more interested in the extrinsic features of their occupation (see, among others, Sloane & Williams, 2000).

2.3 Home-Based Telework and Perceived Stress: Another Gender Issue?

Flexibility of work in terms of time and space has been long considered as a key factor to significantly promote the organisational productivity (Eurofound, 2011, 2012), while enabling at the same time individuals to better manage challenging work/life pressures (Van Dyne et al., 2007). The enhanced flexibility and autonomy implied by home-based jobs may frequently come with higher work intensity and longer working hours, besides raising organizational, work-life balance and privacy issues (among others, Vasumathi, 2018; Bharadwaj & Shanker, 2019; Restubog et al., 2020; European Parliament, 2021). Also, home-based workers seem to be exposed to greater levels of stress, and to experience a higher sense of isolation as compared to onsite workers. With specific reference to telework, reported stress and other detrimental effects on workers' work-life balance are more often registered among women with children (Chung & Van der Horst, 2018; Pascucci et al., 2022). Therefore, flexible work arrangements would not be the panacea for settling work-life conflict and time-pressure issues (Del Boca et al., 2020; Espinoza & Reznikova, 2020; Gumy et al., 2022; Rodríguez-Modroño & López-Igual, 2021).

Nevertheless, before the COVID-19 pandemic, home-based teleworking was scarcely utilized both at European and at global level (among others, EU-OSHA, 2021a, 2021b; Mandl et al., 2015; Sostero et al., 2020; Welz & Wolf, 2010), and even the very definitions of such typology of work are yet under discussion. So far, statistically representative studies on these workers are limited, especially at a cross-country level, and not much is known about the specific risks they may face in association with the nature of their activities (Allen et al., 2013; Charalampous et al., 2019; EU-OSHA, 2021b).

For people tele-working from home the risk of facing occupational stress is considered higher when comparing their conditions with those working at their employer's premises, as strongly supported by the literature, both prior to the pandemic (among others Eurofound and ILO, 2017) and during the upsurge of the COVID-19 pandemic (EU-OSHA, 2021b; ILO, 2021; Howe & Menges, 2021; European Parliament, 2021; Fana et al., 2020; van Zoonen et al., 2021). As an instance, home-based workers, in general, could also choose to work when being sick, therefore being more exposed to risks associated with "presenteeism" (Messenger, 2019; Thulin et al., 2019; Steidelmüller et al., 2020; Vargas Llave & Weber, 2020; EU-OSHA, 2021a). As stated in the ILO Report (2021, p. 160), teleworkers are likely to "go straight from the breakfast table to the work desk (and indeed the two are often the same), which may lead to stress and overwork. Presenteeism and work flexibility are two sides of the same coin".

Furthermore, Bonacini et al. (2021) argue that working from home may worsen income inequalities within the labour market, especially when not properly regulated. Their findings related to Italy show that working from home would favour male, increasing the gender pay gap. Pabilonia and Vernon (2023) get similar results for the US since, for given occupation, gender, parental status, and teleworking intensity, working from home implies a higher wage. The authors claim that, on one hand, working from home could increase women's labour market participation; on the other hand, married mothers were forced out

of the labour force to attend parental duties, probably due to prescribed gender norms and the division of labour within households (see also Kalenkoski & Pabilonia, 2022). This was the case of most working mothers, sometimes living with a partner who was teleworking as well, in domestic spaces often unsuitable for office work.

Other recent literature shows that, since the onset of the pandemic, the additional childcare necessities strongly impacted on the gender employment gap, and consequently on gender inequality (Dingel & Neiman, 2020; Fabrizio et al., 2021; Zamarro & Prados, 2021). According to empirical research, women are experiencing a harder load of caregiving activities than men, not only when it comes to childcare, but also regarding care for elderly and disable family members (Zamarro et al., 2021); Fabrizio et al. (2021) provide evidence of a widened gender gap in labour market due to the pandemic; Caselli et al. (2022) advise about a potential widening of gender inequality. In addition, declines in working hours and shifts to working from home have been more numerous among women than among men (Reichelt et al., 2021), with wide discrepancies across countries and occupations. According to Zamarro and Prados (2021), in the US, the shift in working hours has been caused by the unequal partition of childcare which can increase the probability of shift out of employment for working mothers. Matthews et al. (2022) find a positive relationship between working from home and psychological distress for women but not for men in the US during the COVID-19 pandemic.

3 Data Source and Descriptive Analysis

With specific reference to EU countries, the evidence on perceived occupational stress has been obtained from a survey focusing on general working conditions: the European Working Conditions Survey (EWCS), as mentioned in the Introduction. Since 1991, this survey has been implemented every five years by the European Foundation for the Improving of Living and Working Condition. Carried out by face-to-face interviews, it provides a comprehensive picture of the European Union at work across countries, occupations, sectors, and age groups, therefore representing a prominent source of cross-national data. The 2020 round of the EWCS was abruptly interrupted at the beginning of the fieldwork, due to the outburst of the COVID-19 epidemic and. Then in 2021, Eurofound decided to implement a “methodological experiment” where former respondents from the interrupted EWCS 2020 were contacted by telephone and interviewed on specific sections of the same questionnaire. However, two essential aspects must be underlined. On the one hand, the 2021 telephone survey was conducted when the pandemic was still having a substantial influence on economic conditions and working lives were still facing remarkable changes. On the other hand, although all the methodologically suitable procedures have been adopted to provide reliable information, due to the different interviewing mode and the revision of some items, the comparison with previous editions is limited (Eurofound, 2022b). It seems quite difficult to predict a full return to a to pre-pandemic “normality” (Alon et al., 2020). In fact, for 2022–23, a non-uniform behaviour of employers has been observed about different modes of working from home/remotely: while, on the one hand, some companies have made structural the procedures of working outside their premises (for at least a few days a week), others have required employees to be regularly present at the company sites (see, among others: Vyas, 2022). Moreover, as underlined by Barrero et al., (2023, p. 25),

«The pandemic triggered a mass social experiment in working arrangements» which, especially in hybrid forms, are likely to last for a long time.

Although outdated, the information contained in the last available EWCS (Eurofound, 2017a) may be considered a suitable source for analyzing working conditions, which may become prevailing after a suitable transition. Besides, the 2015 wave includes a specific question on the level of stress as perceived by workers, which was deeply modified in the EWCTS.

The dataset of interest is retrieved from <http://discover.ukdataservice.ac.uk>. A detailed description of the survey design and of its main results can be found in Eurofound (2017b). The whole sample refers to approximately 44,000 workers³ in 35 countries, comprising the 28 European Union (EU) Member States, 5 candidate countries for EU membership, Norway and Switzerland. At country level the required representative sample size was 1,000.

The administered EWCS questionnaire covers workers' characteristics, employment conditions, working time, exposure to physical and psychosocial risks, work organization, and several self-assessed dimension of work-life balance, health, and well-being. We focus on self-perceived occupational stress, considering as response variable the answers to question Q61m: "Do you experience stress in your work?", measured on a 5-point scale ranging from always to never.

As pointed out in Sect. 2, general individual and occupational well-being can be associated with many determinants as basic socio-demographic covariates, job characteristics, and work-life balance dimensions. In particular, we consider: *gender* (question Q2a, expressed using the usual dummy variable, where female = 1), *age* (question Q2b, expressed in years), *number of household components* (question Q1). For marital status, we employ a dummy variable (where *married* = 1 and 0 otherwise), question Q3c; the presence of children aged less than 16 years (*having children*) is again a dummy variable, from question Q3c (where Q3b < 16). The education level (question Q106) is here described by means of two dummies: holding a secondary school degree (*high-school edu*) and a university degree (*tertiary edu*). Some job characteristics are defined by questions Q2d and Q11, transformed into two dummies, one to distinguish between full-time and part-time job (where *full-time job* = 1), and the other to indicate permanent versus non-permanent job (*permanent job*, where permanent job = 1). A dummy for the condition of working in the *private* sector is also employed, stemming from question Q14 (where *private* = 1). The number of hours spent at work per week (*whours*) is obtained using responses to question Q24. The *home-based* working condition is given by a dummy variable for which value 1 is associated to responses "daily" or at least "several times a week" to question Q35e. The unpaid duties considered are caring for or educating children or grandchildren (Q95c: *carechildren*) and caring for elderly or disabled relatives (Q95e: *caregiving*). Respondents' levels of involvement in such activities were collected through a 5-point wording scale (Daily; Several times a week; Several times a month; Less often; Never). Domestic working and cooking

³ In 2015, the European labour force accounts for 259 million people, of which 221 million belonged to the EU28 Member States (updated figures for 2019-2021 are in Table 3 in the "Appendix"). Main statistics at EU28 level show that the employment rate among those aged 15-64 years was 66%, with the female employment rate being approximately 11% lower than the male one. Approximately 31% of the workers were aged over 50 years, while 40% were aged 35-49 years, so that the number of older workers exceeds the number of workers in the youngest cohort (Eurofound, 2017b).

duties (Q95d) were not explicitly considered since largely overlapping with gender and carechildren (Q95c) variables. To take into account the good fitting of working hours with family and social commitments outside work, we employ question (Q44, *working hours fit*), where answers are expressed on a 4-point scale ranging from “not at all well” to “very well”. Other three potential stress drivers (expressed on a 5-point scale) are related to workers’ autonomy on the job (*infl decision*; question Q61n), relationships with coworkers and supervisors in terms of provided support (*colleague support*, question Q61a, and *manager support*, question Q61b). Using question Q93, a dummy variable is derived to capture the multifaceted features influencing work sustainability in a medium-long-term perspective (*sustainable work*), as previously mentioned. Due to the high number of missing values in net monthly earnings answers, the individual’s economic status is measured by means of question Q100 (*make-ends-meet*) rated on a six-point wording scale ranging from “Very easily” to “With great difficulty”. To improve the readability of the results, we conveniently reversed the original scales to be interpreted from the lowest to the highest level of agreement/participation/perception. Finally, bearing in mind that the EWCS was conducted in 2015, about 10 years after the enlargement of the European Union, ended with the accession of Croatia in 2013, it is reasonable to suppose that an effect in the data cannot be excluded a priori, in association to structural differences in economic systems and labour market regulation (see among many others: Kundera, 2019; Bulmer, 2020). Therefore, we include among the drivers a convenient dummy (Deu12) concerning the EU-12 original Membership. The full description of questionnaire items used to derive the selected variables is reported in Table 4 of the “Appendix”.

Our study refers to the active population, excluding from the sample both retired people and those unable to work. However, it was not possible to employ information from all the statistical units in the dataset for each individual country. As a matter of fact, a preliminary screening for missing values of the selected explanatory variables lowers the original sample size to 21,118 respondents (47.4% are men). The non-response rate for items of interest is roughly similar for all countries, leading to a decrease of 50% of the sample on average. Exceptions are Belgium and Poland: in the first case the sample amplitude drops by 35%, whereas in the second case such reduction accounts for almost 60%. This nearly homogeneous reduction of the sample size across countries did not modify the overall sample composition with respect to the socio-demographic variables that will be considered in the models. However, such a reduction suggests that analyses should not be conducted considering the single state impact on the response pattern, but rather studying the effect of grouping the states in specific country clusters, as detailed below.

In this reduced target sample, 32.9% of respondents state to be single, 34.6% have at least a child under 16 years of age, 62.6% hold a high school degree, while the 28.7% declare to have a tertiary education qualification. Permanent and full-time workers are 82.7% and 80% respectively, and 64.3% of respondents state to work in the private sector. About 70.2% of the considered interviewees claim that they will be able to do their current job or a similar one in the future.

Descriptive results referred to target sample indicate that about 27% of respondents claim to usually experience work-related stress, since the distribution of the answers is: “Always” (10.7%); “Most of the time” (16.8%); “Sometimes” (40.0%); “Rarely” (19.9%); “Never” (12.6%). These proportions are quite the same across gender (see Fig. 1).

People who claim to experience occupational stress “always” or “most of the time”, are about 36% among those who report unsustainable working conditions and about 24%

Table 1 Descriptive statistics for non-dummy variables by gender

Variables	Males				Females			
	Mean	Std. Dev	Min	Max	Mean	Std. Dev	Min	Max
Age	42.9	11.4	20	70	43.2	11.1	20	70
N. house components	2.8	1.3	1	10	2.8	1.3	1	10
Working hours per week	39.9	9.2	1	100	35.2	10.2	1	100
Make-ends-meet	3.9	1.2	1	6	3.8	1.2	1	6
Caregiving	1.5	1.0	1	5	1.7	1.2	1	5
Carechildren	2.7	1.7	1	5	3.2	1.8	1	5
Working hours fit	3.0	0.7	1	4	3.1	0.7	1	4
Colleague support	4.1	1.0	1	5	4.0	1.0	1	5
Manager support	3.7	1.2	1	5	3.8	1.2	1	5
Infl decisions	3.2	1.3	1	5	3.1	1.3	1	5

Source: Authors elaborations from EWCS 2015

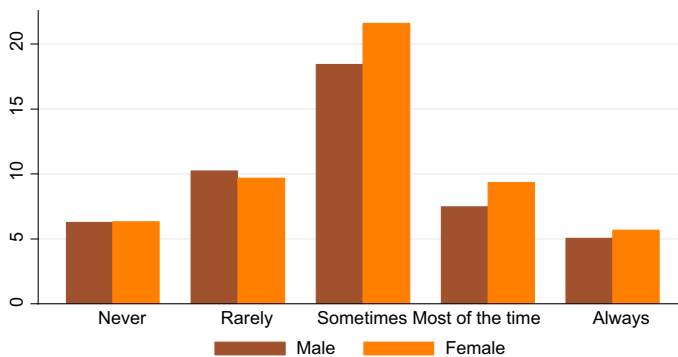


Fig. 1 Distribution of level of perceived occupational stress by Gender. Source: Authors elaborations from EWCS 2015

among the others. Respondents declaring to work “daily” or “several times a week” from home account for 3.6% and 4.6% respectively; even in this case there is no significant difference by gender. These percentages are in line with corresponding findings in the EU Labour Force survey. Most women (90.3%) report doing housework “daily” or “several times a week”, against the 56.7% of men, suggesting a strong female prevalence in unpaid work activities which are persistent across household types and still largely undervalued, although geographically partially diversified (Ragnarsdóttir et al., 2023).

Descriptive statistics for non-dummy variables are reported in Table 1.

4 Estimated Model and Results

Since the response variable, perceived occupational stress, is measured on a 5-point Likert scale, we decided to employ a heteroskedastic Ordered Probit model (Agresti, 2010; Tutz, 2012). Such a framework allows to detect the effects of subjective, environmental, and economic variables on stress perception, not disregarding the possible presence of heteroskedasticity across observations likely due to the structural differences in the economic and socio-cultural systems of the countries.

The probability of observing the outcome j corresponds to the probability that the estimated linear function, plus random error, is within the range of the cutpoints estimated for the outcome. The model assumes the following expression:

$$\Pr(Y_i = j) = \Pr(k_{j-1} < \beta_1 x_{1i} + \beta_2 x_{2i} + \dots + \beta_h x_{hi} + u_i \leq k_j) \quad i = 1 \dots n \quad (1)$$

where as usual, the error terms follow a normal distribution $u_i \sim N(0, \sigma_i^2)$, $x_i = (x_{1i}, x_{2i}, \dots, x_{hi})'$ is the vector of the observed h variables for i -th observation; the coefficients $(\beta_1 \dots \beta_h)$ and cut-points $k_1 \dots k_{j-1}$ are the parameters to be estimated. The number of possible outcomes is J and k_0 is taken as $-\infty$, and k_j is taken as $+\infty$. It is a well-established result that if the homoskedastic error hypothesis is incorrectly assumed in binary or ordinal regression models, the standard errors are wrong, the parameter estimates are biased and, as a consequence, the inferential conclusions based on the usual z -test statistics can be misleading (Agresti, 2010). Williams (2011) proposed the heteroskedastic ordered models in which the factors affecting the log-variances are explicitly specified assuming the following expression:

$$\log \sigma_i^2 = \sum_{s=1}^m \gamma_s v_{is}, \quad i = 1 \dots n \quad (2)$$

where $v_i = (v_{i1}, v_{i2}, \dots, v_{im})'$ is the vector collecting the values of the m factors for the i -th observation that define groups with different error variances in the underlying latent variable. The vector v_i might include dummy or continuous variables. Maximum Likelihood estimates of the model parameters are obtained using the OGLM package in STATA14 (Williams, 2010). The estimated coefficients, along their standard errors, z -statistics and 95% Confidence Interval are reported in Table 2. For all dummy variables the references category is reported in parenthesis. Alongside the parameter estimates, the cut point k_j estimates, the pseudo R^2 and the overall χ^2 test value and its associated p -value are provided.

Our findings show significant effects on response pattern of several respondents' characteristics and self-assessments. Among workers' attributes, *gender*, *number of the household components*, and *age* turn out to be statistically significant, in line with current research on the topic.

The positive sign of the coefficient for gender implies that women are more likely to report a higher intensity of perceived stress (for the extreme response category of the scale), while *marital status* seems to not exert a significant impact. On the contrary, the number of *household components* is likely to affect indirectly the occupational stress, influencing the work-family balance, and then the perceived level of stress (Sayer & Gornick, 2012). These results seem to sketch a picture consistent with both large part of the literature (see Padkapayeva et al., 2018, among others) and with the exploratory analyses, although confirming a fairly stereotypical view of inequality across genders in household duties.

Table 2 Perceived occupational stress, heteroskedastic ordered probit estimated coefficients

Variables	Coef	Std. Err	z	P>z	[95% Conf. Interval]
Gender (ref. Male)	0.102	0.011	8.930	0.000	0.080 0.125
Age	0.028	0.004	7.130	0.000	0.020 0.036
Age ²	-4.e-4	0.000	-8.000	0.000	0.000 0.000
Married, other (ref. Single)	0.011	0.013	0.830	0.406	-0.015 0.037
N. household components	-0.015	0.005	-2.790	0.005	-0.025 -0.004
Having children (ref. No)	-0.019	0.014	-1.320	0.186	-0.047 0.009
High-school edu (ref. No)	0.019	0.013	1.420	0.155	-0.007 0.044
Tertiary edu (ref. No)	-0.030	0.014	-2.180	0.030	-0.056 -0.003
Permanent job (ref. No)	0.100	0.015	6.470	0.000	0.070 0.130
Full-time job (ref. No)	-0.015	0.017	-0.840	0.400	-0.048 0.019
Private job (ref. No)	-0.047	0.011	-4.140	0.000	-0.070 -0.025
N. working hours per week	0.008	0.001	10.410	0.000	0.006 0.009
Home-based work (ref. No)	0.156	0.019	8.370	0.000	0.119 0.192
Make-ends-meet	-0.002	0.005	-0.530	0.597	-0.012 0.007
Caregiving	0.007	0.005	1.450	0.147	-0.003 0.017
Working hours fit	-0.214	0.010	-22.000	0.000	-0.233 -0.195
Colleague support	0.009	0.006	1.330	0.182	-0.004 0.021
Manager support	-0.064	0.006	-10.780	0.000	-0.075 -0.052
Infl. decisions	0.053	0.005	11.290	0.000	0.043 0.062
Sustainable work (ref. No)	-0.179	0.013	-13.520	0.000	-0.205 -0.153
Deu12 (ref. No)	0.109	0.012	9.220	0.000	0.086 0.133
<i>Log(σ) equation</i>					
Gender	-0.047	0.013	-3.740	0.000	-0.071 -0.022
Carechildren	-0.007	0.003	-2.150	0.032	-0.014 -0.001
Fulltime job	-0.092	0.016	-5.800	0.000	-0.123 -0.061
Homebased work	-0.088	0.022	-4.030	0.000	-0.132 -0.045
Make-ends-meet	-0.036	0.005	-7.160	0.000	-0.045 -0.026
Sustainable work	-0.079	0.014	-5.780	0.000	-0.106 -0.052
Cut point 1	-0.827	0.091	-9.130	0.000	-1.004 -0.649
Cut point 2	-0.294	0.088	-3.340	0.001	-0.467 -0.122
Cut point 3	0.516	0.089	5.800	0.000	0.341 0.690
Cut point 4	1.014	0.092	11.000	0.000	0.833 1.195
Pseudo R ² =0.0382			LR chi2(27)=2401.30 Prob> chi2=0.00		

Source: Authors elaborations from EWCS 2015

As above-mentioned, working women deal with more familial duties than men, and this is likely to make them feel more stressed. In addition, it should be recalled what stated by the literature about female workers still suffering from sex discrimination on the job more often than men do.

Furthermore, women are asked to demonstrate that they are as good as men at their jobs, a circumstance likely to impact on the perception of occupational stress (see, among others Lunau et al., 2015).

Although widely considered as one of the determinants of occupational stress in empirical models, little attention is paid in literature to how stress perception varies with age. Our results show that such an effect does occur (see Figures 2–5, where more discussion is provided). We may observe that *age* exerts the usual down-shaped parabolic significant effect. However, it must be kept in mind that the survey was carried out in the aftermath of the effects of the financial and sovereign debt crisis that hit Europe in 2013–2014. It is therefore to be expected that workers in the central working age may have experienced a greater perception of work-related stress than usual.

In line with most literature, some negative effects are observed with respect to respondents' level of education, although only if considering the university degree (*tertiary*), implying that workers with a lower level of education, also considered as a proxy of income, may count on less resources to face stressful situations at work (see Michael et al., 2009).

Examining the work-related characteristics, significant effects are those related to the duration of contract (*permanent job*), and number of working hours per week. With respect to the sector of activity, in this sub-sample those who work in the private sector (*private job*) are less likely to report high levels of stress. Likewise, regularly working from home (*home-based work*) seems to positively affect the perception of the occupational stress, as conveyed from a large strand of the literature (for a comprehensive review, see Lunde et al., 2022).

Statistically significant effects are those of some self-reported conditions. More specifically, work-life balance (*working hours fit*), help and encouragement provided by one's manager (*manager support*), the possibility to influence the decisional process (*infl. decisions*), and the prospect of performing one's job when older (*sustainable work*) do exert a significant effect. Work-life balance, as the individuals attempt to fruitfully share both time and energy between family and work is likely to produce occupational stress when some imbalance arises because of workers' difficulties in playing different roles. As mentioned, in line with the demand-control-support model (Karasek & Theorell, 1990), adverse effects of "bad" working conditions may be reduced by social support from good interpersonal relations on the job. Accordingly, results on help offered by managers show that interpersonal relationships are essential in explaining work-related stress occurrences. With respect to job sustainability, its relationship with occupational stress may be explained considering that a "sustainable job" is perceived as a more decent and secure one. Unpaid duties seem to have no impact on respondents' experience of reported stress, their effect being probably subsumed by the gender variable.

In line with current literature, living in a EU12 country (*deu12*), where economy structure and job regulation systems are allegedly more homogeneous and harmonised, turns out to be a significant covariate (Bulmer, 2020; Kundera, 2019). More specifically, the inequality in household responsibilities across genders is largely and often significantly associated with each country culture, traditions, and individual attitudes towards gendered roles. In this respect, the gender equality indicators for the different domains, as presented annually by the European Institute for Gender Equality (EIGE), may help to shed a light on specific features, both at the EU and country level (EIGE, 2023). In the reports issued in recent years (2019–2023) the unequal contribution in unpaid home working, such as in cooking and caring activities, with geographical different impacts, has scarcely improved, the main part continuing to fall on women making it harder for them to balance personal life, jeopardizing their earning potential and well-being (EIGE, 2019).

The heteroskedasticity seems to be affected by gender, child-care activities, working full time, home-based working condition, making-ends-meet, and sustainable work. All

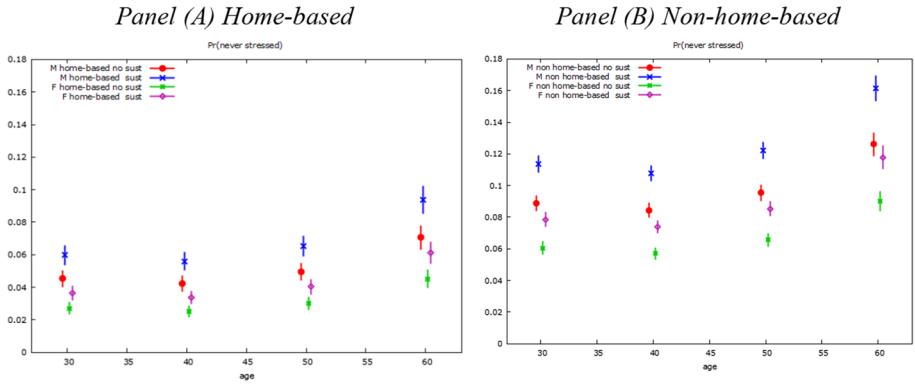


Fig. 2 Estimated probabilities and 95% Confidence Intervals of being “Never stressed” by gender, age, home-based working condition and job sustainability. *Source:* Authors elaborations from EWCS 2015

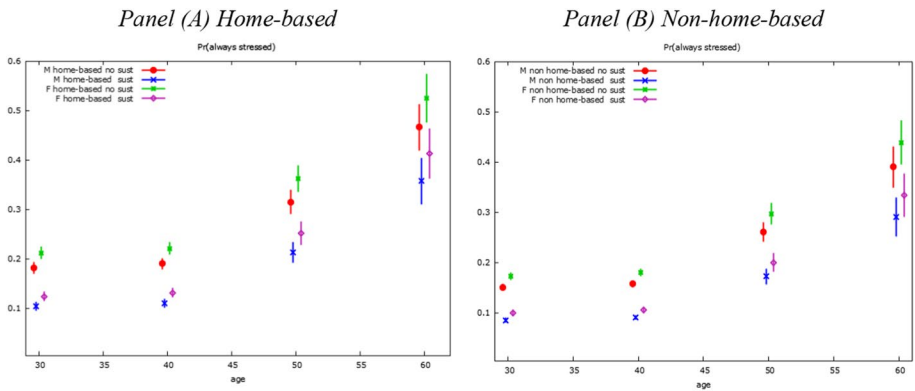


Fig. 3 Estimated probabilities and 95% Confidence Intervals of being of being “Always stressed” by gender, age, home-based working condition and job sustainability. *Source:* Authors elaborations from EWCS 2015

these aspects are strongly linked to each other and, again, may impact working life very differently according to each country structural characteristics (Dunatchik et al., 2021; Mascherini & Bisello, 2020).

Nonetheless, in this modelling framework, it is extremely difficult to identify the direction of any causal process. As well-known, in the Ordered Probit model the sign and the magnitude of the coefficients do not provide a clear information about the marginal effects of a given explanatory variable for the intermediate categories (see Greene, 2008, Section 23.10). Therefore, it seems convenient to evaluate the effects of selected variables on the dependent one targeting specific profiles. In particular, we focus on the estimated probabilities for the extreme responses, when “stress at work” = *never*, and “stress at work” = *always*, discriminating by some relevant respondents’ characteristics.

First, we consider a respondent profile describing a worker coming from a EU12 country, holding high-school education and a full-time permanent job in the private sector, married with children, in a household of 3 components, working 40 h per week. We distinguish by gender and age, and home-based vs. non-home-based condition, sustainable vs. non-sustainable work, the remaining ordinal variables being fixed at their modal value.

The estimated probabilities for such worker profiles are reported in Figs. 2 and 3. More in detail, Fig. 2, panel (A) and (B), displays the estimated probabilities and the associated 95% confidence intervals of being “never stressed” by gender, age, and home-based working condition. In general, the estimated probabilities range in (0; 0.18) and those for males self-declaring to be “never stressed” are slightly higher than those of females, both for home-based ones and sustainable/non sustainable working conditions. Such probability increases with age approaching retirement and it is higher for non-home-based individuals.

In Fig. 3 the role of the sustainable job is highlighted in the case where respondents declare to be “always stressed”. As it can be seen in Panel (A), the highest probabilities are for females regularly working from home with a non-sustainable job, followed by males sharing the same profile. The same general results can be observed in Panel (B) for non-home-based respondents. In this case, the estimated probabilities range in (0.2; 0.6) and it can be appreciated how these probabilities significantly increase after the turn of 50 years, for all respondents, but with a greater effect for workers who state to perform a non-sustainable job. Such evidence could be explained considering that men and women make use of hybrid work in different ways, with distinct consequences as regards their well-being: although in some cases working from home could make it easier for women to improve work-life balance, the burden of housework continues to be very often a female responsibility, contributing to their higher level of perceived stress (Chung & van der Lippe, 2020). This effect in the response pattern should be examined bearing in mind that 90.3% of woman in the sample of interest report doing housework tasks “daily” or “several times a week”.

It is worth noticing that the estimated probabilities for the “never stressed” category present confidence intervals which do not overlap. Summing up, these cross-referenced results of the combined effect of gender, home-based condition and sustainable job suggest that non-home-based men declare a significantly different (lower) perceived stress with respect to women.

5 Concluding Remarks

The abrupt transformation in working conditions caused by the COVID-19 pandemic has led scholars to approach the topic of well-being at work also considering the issue of work sustainability, often in a gender perspective. Consequently, a vast literature, both theoretical and empirical, has been produced in the period 2020–2023, conditioned by the exceptional nature of the scenario. As the effects of the pandemic have receded, there has been a gradual return to “normality”, although some of the changes are likely to persist. Among these, the spread of home-based teleworking is probably one of the most impactful in terms of working conditions: while, on the one hand, working from home seems to favour work-life balance, on the other hand, presenteeism, isolation from colleagues, and unequal domestic workload between gender represent some major determinants of perceived occupational stress. Yet, sustainable work comes from the interaction of fruitful working and living conditions, being one of the prerequisites for occupational well-being. This precondition is in turn one of the main components of overall individual well-being: it is therefore challenging to establish a direction in the causal process.

The objective of our study was to analyse the occurrence of occupational stress across European Union countries, considering gender and job sustainability, with a focus on the

effects of home-based work in a pre-COVID-19 scenario in order to shed a light on working conditions as experienced in an “ordinary” setting. In particular, we have examined the perception of occupational stress in a framework in which people would welcome working from home because such arrangement would be suitable and beneficial, and not since they were basically forced to stay at home because of extreme circumstances.

A remarkable aspect that has emerged is that, while descriptive analyses do not seem to reveal any different response behaviour by gender with respect to stress, through the implemented Ordered Probit model it becomes clear that a difference in the response pattern does occur and it is also prominent. Alongside the idea that working from home could facilitate workers in terms of flexibility, making them able to better balance work and family duties, our results suggest that job sustainability does impact on respondents’ experience of work-related stress.

One of the goals of this paper was to identify which conditions could help in rising good practices for home-based working, referring to a normal scenario. A question arises about whether and which hybrid forms of work are here to stay and even to increase with the end of the COVID 19 pandemic. As a matter of fact, the future of office-based work is still largely unknown since many companies have experienced large cost savings (in rental, cleaning, energy demand, and so on) during the pandemic, inducing a re-design of work organization (JP Morgan, 2021). Current debate is now enriched by some studies carried out at the early stages of the pandemic (see e.g., Steidelmüller et al., 2020), highlighting the enterprises’ protest for workers’ isolation that can negatively affect their engagement and productivity. At the same time, employees working from home may save time and costs of commuting pursuing a better balance between home and family duties, but they may end up working when being sick, or beyond their scheduled hours, thus undermining job sustainability.

The critical aspects of home-based/teleworking emerged during the pandemic indicate that new policy implementation at the national level is desirable. However, teleworkable occupations are so differentiated that it is necessary to allow enterprises some flexibility in defining corporate policies for sustainable working practices (EU-OSHA, 2021a; Fana et al., 2020). Despite the considered evidence and the literature on the topic, job related stress is instead largely considered as an individual problem, with workers facing it by themselves with their own resources. Companies should in fact be enabled to recognize occupational stress as a risk and manage it consciously and effectively (EU-OSHA, 2013), also providing workers with improved working conditions and with (psychological) support as well.

Future research is necessary to deepen these analyses by type of occupation and household composition, sector of economic activity, firm size, as well as with respect to geographical areas to provide decision makers with more effective insights. The possibility of successfully conducting such studies is conditional on the availability of not only up-to-date but also representative data for such detail of investigation.

Appendix

See Tables 3 and 4.

Table 3 Employees and Self-Employed persons working usually from home as a percentage of the reference population, annual data 2019–2021

Countries	Employees			Self-employed persons		
	2019	2020	2021	2019	2020	2021
EU28	3.1	:	:	19.0	:	:
Belgium	3.7	14.8	24.3	26.5	31.9	36.8
Bulgaria	0.2	1.1	2.3	2.4	:	6.6
Czechia	1.3	3.8	4.9	21.4	23.8	19.0
Denmark	5.4	15.2	16.5	36.7	38.7	36.5
Germany	3.2	11.9	15.7	25.9	32.4	32.1
Estonia	4.0	10.2	13.4	28.1	29.4	27.6
Ireland	3.8	19.9	31.1	28.4	32.2	39.6
Greece	1.4	8.0	7.1	3.0	5.0	5.9
Spain	2.5	9.5	7.9	17.4	18.5	18.6
France	4.7	14.3	15.3	24.3	26.6	29.6
Croatia	1.5	2.6	4.0	5.4	7.0	10.3
Italy	1.1	11.1	8.1	12.9	16.9	9.1
Cyprus	0.7	4.2	6.2	5.2	6.6	11.6
Latvia	1.1	1.5	9.4	17.5	23.3	23.9
Lithuania	0.8	4.0	7.2	14.0	16.2	23.5
Luxembourg	8.9	21.8	27.6	37.7	39.8	34.4
Hungary	0.7	2.7	3.5	5.6	10.1	12.2
Malta	4.3	14.2	14.2	16.6	18.2	19.1
Netherlands	9.0	12.9	20.1	43.0	44.0	36.1
Austria	5.8	14.8	14.2	42.2	43.3	30.8
Poland	1.5	6.6	4.8	16.7	18.0	15.7
Portugal	4.8	13.4	14.3	17.4	17.3	15.6
Romania	0.6	2.8	2.2	1.9	2.3	3.9
Slovenia	4.7	5.4	8.5	22.2	22.8	23.9
Slovakia	2.1	4.6	5.4	12.5	12.0	13.6
Finland	10.0	22.4	24.1	44.8	45.2	30.1
Sweden	3.8	:	26.3	27.9	:	34.3
UK	2.4	:	:	16.9	:	:

Source: Eurostat (2022), Labour Force Survey Dataset: lfsa_ehomp, last update: 18 May 2022 https://ec.europa.eu/eurostat/databrowser/view/lfsa_ehomp/default/table?lang=en

: not available

Table 4 Selected variables and questionnaire items

Variable label	Original question code	Question
Gender	Q2a	Gender of respondent (1 Males, 2 Females)
Age	Q2b	How old are you?
N. household components	Q1	Including yourself, can you please tell me how many people live in this household?
Married	Q3c	What is this person's relationship to you? Is he/she your ...? (1 = husband/ wife/partner)
Having children	Q3c	What is this person's relationship to you? Is he/she your ...? (2 = son/daughter)
High School	Q106	What is the highest level of education or training that you have successfully completed? (ISCED code from 04 to 06)
Tertiary	Q106	What is the highest level of education or training that you have successfully completed? (ISCED code from 07 to 09)
Permanent job	Q11	What kind of employment contract do you have in your main job?
Full time job	Q2d	And do you work part time or full time?
Private job	Q14	Are you working in...? (1 = private sector)
Working hours	Q24	How many hours do you usually work per week in your main paid job?
Home based work	Q35e	Please take a look at these locations (option E: your own home). In a moment, I will ask you how often you have worked in each location [during the last 12 months in your main paid job] (original scale 1 "Daily" 2 "Several times a week" 3 "Less often or Never"; in the model as dummy 1 = Daily or Several times a week, 0 otherwise)
Make-ends-meet	Q100	A household may have different sources of income and more than one household member may contribute to it. Thinking of your household's total monthly income, is your household able to make ends meet...? (original scale 1—Very easily 2—Easily 3—Fairly easily 4—With some difficulty 5—With difficulty 6—With great difficulty. Scale reversed in the model)
Caregiving	Q95e	In general, how often are you involved in any of the following activities outside work? (option E—Caring for elderly/ disabled relatives; original scale 1 "Daily" 2 "Several times a week" 3 "Less often or Never"; in the model as dummy 1 = Daily or Several times a week, 0 otherwise; Scale reversed in the model)
Carechildren	Q95c	In general, how often are you involved in any of the following activities outside work? (Option C: Caring for and/or educating your children, grandchildren; original scale 1 "Daily" 2 "Several times a week" 3 "Less often or Never"; in the model as dummy 1 = Daily or Several times a week, 0 otherwise; Scale reversed in the model)

Table 4 (continued)

Variable label	Original question code	Question
Working hours fit	Q44	In general, how do your working hours fit in with your family or social commitments outside work? (1 = not at all—4 = very well)
Sustainable work	Q93	[IF RESPONDENT AGED 55 OR YOUNGER AT Q2b OR DK/REFUSED AT Q2b: Do you think you will be able to do your current job or a similar one until you are 60 years old?] [IF RESPONDENT AGED 56 OR OLDER AT Q2b: Do you think you will be able to do your current job or a similar one in five years' time?](1 = yes 2 = no)
Q61. For each of the following statements, please select the response which best describes your work situation. (1 = never—5 = always)		
Colleague Support	Q61A	Your colleagues help and support you
Manager Support	Q61B	Your manager helps and supports you
Stress	Q61M -	You experience stress in your work
Infl. decisions	Q61N	You can influence decisions that are important for your work
Deu12	P3b	EU12 Membership (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain)

Source: Authors' elaboration on EWCS 2015 questionnaire

Acknowledgements Authors gratefully acknowledge the financial support by grant SI-WCWB from University of Naples Federico II (FRA 2022), Rectoral Decree no.3429, 07/09/2023 (CUP: E65F22000050001).

Author contribution All authors equally contributed to the study and are responsible for its content and they have agreed to this submission. All authors read and approved the final manuscript. The manuscript has not been previously published in any language anywhere. Very preliminary results of this research have been presented to the 51st Scientific Meeting of the Italian Statistical Society (SIS 2022), University of Campania “Luigi Vanvitelli” in Caserta, June 22–24, 2022, and to ICSA 2022—International Conference on Sustainability Analysis on theoretical perspectives and tools for policy-makers, “La Sapienza” University of Rome, July, 14th–15th 2022, with the title “Perceived occupational stress and working from home in EU: another gender gap?”.

Funding Open access funding provided by Università degli Studi di Napoli Federico II within the CRUI-CARE Agreement. The authors have no relevant financial or non-financial interests to disclose.

Declarations

Conflict of interest The authors report there are no competing interests to declare.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article’s Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Agresti, A. (2010). *Analysis of ordinal categorical data*. Wiley.
- Alam, S. A., & Bose, B. (2022). Stepping into adulthood during a recession: Did job losses during the great recession impact health of young adults? *Health Economics*, 31(8), 1730–1751. <https://doi.org/10.1002/hec.4535>
- Alcover, C., Chambel, M. J., & Estreder, Y. (2020). Monetary incentives, motivational orientation and affective commitment in contact centers. A multilevel mediation model. *Journal of Economic Psychology*, 81, 102307.
- Allen, T. D., Johnson, R. C., Kiburz, K. M., & Shockley, K. M. (2013). Work-family conflict and flexible work arrangements: Deconstructing flexibility. *Personnel Psychology*, 66, 345–376.
- Alon, T., Doepke, M., Olmstead-Rumsey, J., Tertilt, M. (2020). The impact of COVID-19 on gender equality (No. w26947). National Bureau of Economic Research.
- Arcagni, A., Fattore, M., Maggino, F., & Vittadini, G. (2021). Some critical reflections on the measurement of social sustainability and well-being in complex societies. *Sustainability*, 13(22), 12679.
- Baldrige, D. C., & Kulkarni, M. (2017). The shaping of sustainable careers post hearing loss: Toward greater understanding of adult onset disability, disability identity, and career transitions. *Human Relations: Studies towards the Integration of the Social Sciences*, 70(10), 1217–1236.
- Barrero, J. M., Bloom, N., & Davis, S. J. (2023). The evolution of work from home. *Journal of Economic Perspectives*, 37(4), 23–49.
- Bharadwaj, M. V., & Shanker, M. (2019). Women at workplace and work life balance: A literature review. *Semcom Management and Technology Review*, 7(1), 46–59.
- Bonacini, L., Gallo, G., & Scicchitano, S. (2021). Working from home and income inequality: Risks of a ‘new normal’ with COVID-19. *Journal of Population Economics*, 34(1), 303–360.
- Bulmer, S. (2020). *The member states of the European Union*. Oxford University Press.
- Capecchi, S., Cappelli, C., Curtarelli, M., & Di Iorio, F. (2023). Synthetic indicators to analyze work-related physical and psychosocial risk factors: Evidence from the European Working Conditions Survey. *Quality & Quantity*. <https://doi.org/10.1007/s11135-023-01617-8>

- Caselli, F., Grigoli, F., Sandri, D., & Spilimbergo, A. (2022). Mobility under the COVID-19 pandemic: Asymmetric effects across gender and age. *IMF Economic Review*, 70, 105–138. <https://doi.org/10.1057/s41308-021-00149-1>
- Charalampous, M., Grant, C. A., Tramontano, C., & Michailidis, E. (2019). Systematically reviewing remote e-workers' well-being at work: A multidimensional approach. *European Journal of Work and Organizational Psychology*, 28(1), 51–73.
- Chung, H., & Van der Horst, M. (2018). Women's employment patterns after childbirth and the perceived access to and use of flexitime and teleworking. *Human Relations*, 71(1), 47–72.
- Chung, H., & van der Lippe, T. (2020). Flexible working, work-life balance, and gender equality: Introduction. *Social Indicators Research*, 151, 365–381.
- European Commission. (2020). *Study to gather evidence on the working conditions of platform workers*. <https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8280>
- Conigliaro, P. (2021). Between social sustainability and subjective well-being: The role of decent work. *Social Indicators Research*, 157, 139–174. <https://doi.org/10.1007/s11205-020-02564-9>
- Cortés Aguilar, A., García Muñoz, T. M., & Moro-Egido, A. I. (2013). Heterogeneous self-employment and satisfaction in Latin America. *Journal of Economic Psychology*, 39, 44–61.
- Countouris, N., De Stefano, V., Piasna, A., & Rainone, S. (2023). *The future of remote work*. European Trade Union Institute (ETUI).
- De Vos, A., Dujardin, J. M., Gielens, T., & Meyers, C. (2016). *Developing sustainable careers across the lifespan*. Springer.
- Del Boca, D., Oggero, N., Profeta, P., & Rossi, M. (2020). Women's and men's work, housework and childcare, before and during COVID-19. *Review of Economics of the Household*, 18, 1001–1017.
- Dingel, J. I., & Neiman, B. (2020). How many jobs can be done at home? *Journal of Public Economics*, 189, 104235.
- Dunatchik, A., Gerson, K., Glass, J., Jacobs, J. A., & Stritzel, H. (2021). Gender, parenting, and the rise of remote work during the pandemic: Implications for domestic inequality in the United States. *Gender & Society*, 35(2), 194–205. <https://doi.org/10.1177/08912432211001301>
- EIGE. (2019). Gender equality index 2019, work-life balance. <https://eige.europa.eu/publications-resources/publications/gender-equality-index-2019-work-life-balance>. <https://doi.org/10.2839/319154>
- EIGE. (2023). Gender equality index 2023: Towards a green transition in transport and energy. <https://eige.europa.eu/publications-resources/publications/gender-equality-index-2023-towards-green-transition-transport-and-energy#eige-files>. <https://doi.org/10.2839/64810>
- Espinoza, R., & Reznikova, L. (2020). Who can log in? The importance of skills for the feasibility of teleworking arrangements across OECD countries. *OECD Social, Employment and Migration Working Papers*, n. 242, OECD Publishing, Paris.
- EU-OSHA. (2013). *Psychosocial risks and workers' health*, OSHWiki (contributor: Hupke M.). Available at: https://oshwiki.eu/wiki/Psychosocial_risks_and_workers_health. Accessed 2 December 2022.
- EU-OSHA. (2021a). *Teleworking during the COVID-19 pandemic: Risks and prevention strategies*. Publications Office of the European Union.
- EU-OSHA. (2021b). *Home-based teleworking and preventive occupational safety and health measures in European workplaces: Evidence from ESENER-3*. Publications Office of the European Union.
- EU-OSHA. (2023). *Regulating telework in a post-COVID19 Europe: Recent developments*. European Agency for Safety and Health at Work, Publications Office of the European Union. Available at: <https://osha.europa.eu/en/publications/regulating-telework-post-covid-19-europe-recentdevelopments>
- Eurofound. (2011). *Links between quality of work and performance*. Publications Office of the European Union.
- Eurofound. (2012). *Organisation of working time: Implications for productivity and working conditions*. Publications Office of the European Union.
- Eurofound. (2015). *Sustainable work over the life course: Concept paper*. Publications Office of the European Union.
- Eurofound. (2017a). *European working conditions survey, 2015*. [data collection]. 4th Edition. UK Data Service. SN: 8098. <https://doi.org/10.5255/UKDA-SN-8098-4>
- Eurofound. (2017). *Sixth European working conditions survey overview report (2017 update)*. Publications Office of the European Union.

- Eurofound. (2022a). *Telework in the EU: Regulatory frameworks and recent updates*. Publications Office of the European Union.
- Eurofound. (2022b). *Working conditions in the time of COVID-19: Implications for the future, European working conditions telephone survey 2021 series*. Publications Office of the European Union.
- Eurofound and the International Labour Office. (2017). *Working anytime, anywhere: The effects on the world of work*. Publications Office of the European Union.
- European Parliament, et al. (2021). The impact of teleworking and digital work on workers and society. In M. Samek Lodovici (Ed.), *Publication for the Committee on Employment and Social Affairs*. Policy Department for Economic, Scientific and Quality of Life Policies (IPOL), European Parliament.
- Eurostat. (2022). Labour force survey, employment, unemployment database. <https://ec.europa.eu/eurostat/web/main/data/database>
- Fabrizio, S., Gomes, D. B. P., Tavares M. M. (2021). COVID-19 She-Cession: The employment penalty of taking care of young children. *International Monetary Fund Working Paper* WP/21/58.
- Fan, W., & Moen, P. (2022). Working more, less or the same during COVID-19? A mixed method, intersectional analysis of remote workers. *Work and Occupations*, 49(2), 143–186. <https://doi.org/10.1177/07308884211047208>
- Fana, M., Tolan, S., Torrejón, S., Urzi Brancati, C., & Fernández-Macías, E. (2020). *The COVID confinement measures and EU labour markets*. Publications Office of the European Union.
- Fletcher, J. M., Sindelar, J. L., & Yamaguchi, S. (2011). Cumulative effects of job characteristics on health. *Health Economics*, 20, 553–570. <https://doi.org/10.1002/hec.1616>
- Gaunt, R., & Benjamin, O. (2007). Job insecurity, stress and gender: The moderating role of gender ideology. *Community, Work & Family*, 10, 341–355.
- Gianakos, I. (2000). Gender roles and coping with work stress. *Sex Roles*, 42, 1059–1079.
- Goubet, K. E., & Chryssikou, E. G. (2019). Emotion regulation flexibility: Gender differences in context sensitivity and repertoire. *Frontiers in Psychology*, 10, 935.
- Greene, W. (2008). *Econometric analysis* (6th ed.). Prentice Hill Publishing.
- Gumy, J. M., Plagnol, A. C., & Piasna, A. (2022). Job satisfaction and women's timing of return to work after childbirth in the UK. *Work and Occupations*, 49(3), 345–375. <https://doi.org/10.1177/0730884221087988>
- Gyllenstein, K., & Palmer, S. (2005). The role of gender in workplace stress: A critical literature review. *Health Education Journal*, 64, 271–288. <https://doi.org/10.1177/001789690506400307>
- Hartley, J., Jacobson, D., Klandermans, B., & Van Vuuren, T. (1990). *Job insecurity: Coping with jobs at risk*. Sage Publications Ltd.
- Hassard, J., Teoh, K. R., Visockaite, G., Dewe, P., & Cox, T. (2018). The cost of work-related stress to society: A systematic review. *Journal of Occupational Health Psychology*, 23(1), 1–17.
- Helliwell, J. F., Huang, H., Wang, S., & Norton, M. (2021). World happiness, trust and deaths under COVID-19. *World Happiness Report*, 13–56.
- Herman, C., & Lewis, S. (2012). Entitled to a sustainable career? Motherhood in science, engineering, and technology. *Journal of Social Issues*, 68(4), 767–789.
- Hite, L. M., & McDonald, K. S. (2020). Careers after COVID-19: Challenges and changes. *Human Resource Development International*, 23(4), 427–437. <https://doi.org/10.1080/13678868.2020.1779576>
- Howe, L. C., & Menges, J. I. (2021). Remote work mindsets predict emotions and productivity in home office: A longitudinal study of knowledge workers during the Covid-19 pandemic. *Human-Computer Interaction*, 37(6), 481–507. <https://doi.org/10.1080/07370024.2021.1987238>
- ILO. (2021). *Working from home: From invisibility to decent work*. International Labour Office.
- ILO. (2022). *Texts adopted International Labour Conference—ILC.110/Resolution I, 110th Session*.
- JP Morgan Chase. (2021). *Bouncing back: 2022 commercial real estate outlook*. Retrieved March 7, 2022, retrieved from <https://www.jpmorgan.com/commercial-banking/insights/2022-commercial-real-estate-market-trends>
- Kalenkoski, C. M., & Pabilonia, S. W. (2022). Impacts of COVID-19 on the self-employed. *Small Business Economics*, 58, 741–768. <https://doi.org/10.1007/s11187-021-00522-4>
- Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 24(2), 285–308. <https://doi.org/10.2307/2392498>
- Karasek, R., & Theorell, T. (1990). *Healthy work: Stress, productivity and the reconstruction of working life*. Basic Books.
- Klapproth, F., Federkeil, L., Heinschke, F., & Jungmann, T. (2020). Teachers' experiences of stress and their coping strategies during COVID-19 induced distance teaching. *Journal of Pedagogical Research*, 4(4), 444–452.

- Kossek, E. E., Valcour, M., & Lirio, P. (2014). The sustainable workforce: Organizational strategies for promoting work-life balance and wellbeing. In P. Y. Chen & C. L. Cooper (Eds.), *Work and wellbeing: A complete reference guide* (pp. 213–295). Wiley.
- Krantz, G., & Lundberg, U. (2006). Workload, work stress, and sickness absence in Swedish male and female white-collar employees. *Scandinavian Journal of Public Health*, *6*, 238–246.
- Kundera, J. (2019). The future of EU: Towards a two speed Europe. *European Research Studies Journal*, *12*(3), 261–281.
- Lawrence, B. S., Hall, D. T., & Arthur, M. B. (2017). Sustainable careers then and now. In A. DeVos & B. I. J. M. Van der Heijden (Eds.), *Handbook of research on sustainable careers* (pp. 432–449). Edward Elgar.
- Liddell, T. M., & Kruschke, J. K. (2018). Analyzing ordinal data with metric models: What could possibly go wrong? *Journal of Experimental Social Psychology*, *79*, 328–348.
- Lunau, T., Siegrist, J., Dragano, N., & Wahrendorf, M. (2015). The association between education and work stress: Does the policy context matter? *PLoS ONE*, *10*(3), e0121573.
- Lunde, L. K., Fløvik, L., Christensen, J. O., Johannessen, H. A., Finne, L. B., Jørgensen, I. L., & Vleeshouwers, J. (2022). The relationship between telework from home and employee health: A systematic review. *BMC Public Health*, *22*(1), 47.
- Mandl, I., Curtarelli, M., Riso, S., Vargas, O., & Gerogiannis, E. (2015). *New forms of employment series*. Publications Office of the European Union.
- Mascherini, M., & Bisello, M. (2020). Covid-19 fallout takes higher toll on women, Social Europe (23/6/20). Retrieved March, 10, 2022, from <https://www.socialeurope.eu/covid-19-fallout-takes-higher-toll-on-women>
- Matthews, T. A., Chen, L., Omidakhsh, N., Zhang, D., Han, X., Chen, Z., Shi, L., Li, Y., Wen, M., Li, H., Su, D., & Li, J. (2022). Gender difference in working from home and psychological distress—A national survey of U.S. employees during the COVID-19 pandemic. *Industrial Health*, *60*(4), 334–344. <https://doi.org/10.2486/indhealth.2022-0077>
- McKenzie, K., Whitleym, R., & Weich, S. (2002). Social capital and mental health. *The British Journal of Psychiatry*, *181*(4), 280–283.
- Messenger, J. (Ed.). (2019). *Telework in the 21st century: An evolutionary perspective*. ILO-Edward Elgar.
- Michael, G., Anastasios, S., Helen, K., Catherine, K., & Christine, K. (2009). Gender differences in experiencing occupational stress: The role of age, education and marital status. *Stress and Health: Journal of the International Society for the Investigation of Stress*, *25*(5), 397–404.
- Nappo, N. (2020). Job stress and interpersonal relationships cross country evidence from the EU15: A correlation analysis. *BMC Public Health*, *20*(1), 1–11.
- Pabilonia, S. W., & Vernon, V. (2023). Who is doing the chores and childcare in dual-earner couples during the COVID-19 era of working from home? *Review of Economics of the Household*, *21*(2), 519–565.
- Padkapayeva, K., Gilbert-Ouimet, M., Bielecky, A., Ibrahim, S., Mustard, C., Brisson, C., & Smith, P. (2018). Gender/sex differences in the relationship between psychosocial work exposures and work and life stress. *Annals of Work Exposures and Health*, *62*(4), 416–425. <https://doi.org/10.1093/annweh/wxy014>
- Pascucci, T., Hernández Sanchéz, B., & Sanchéz García, J. C. (2022). Being stressed in the family or married with work? A literature review and clustering of work-family conflict. *European Journal of Management and Business Economics*, *31*(2), 239–265. <https://doi.org/10.1108/EJMBE-06-2021-0191>
- Ragnarsdóttir, B. H., Kostecki, S., & Gornick, J. (2023). Accounting for the value of unpaid domestic work: A cross-national study of variation across household types. *European Sociological Review*, *39*(2), 262–279.
- Reichelt, M., Makovi, K., & Sargsyan, A. (2021). The impact of COVID-19 on gender inequality in the labor market and gender-role attitudes. *European Societies*, *23*(sup1), S228–S245. <https://doi.org/10.1080/14616696.2020.1823010>
- Restubog, S. L. D., Ocampo, A. C. G., & Wang, L. (2020). Taking control amidst the chaos: Emotion regulation during the COVID-19 pandemic. *Journal of Vocational Behaviour*, *119*, 103440. <https://doi.org/10.1016/j.jvb.2020.103440>
- Rivera-Torres, P., Araque-Padilla, R. A., & Montero-Simó, M. J. (2013). Job stress across gender: The importance of emotional and intellectual demands and social support in women. *International Journal of Environmental Research and Public Health*, *10*(1), 375–389.
- Rodríguez-Modroño, P., & López-Igual, P. (2021). Job quality and work-life balance of teleworkers. *International Journal of Environmental Research and Public Health*, *18*(6), 3239.
- Russell, H., Maître, B., Watson, D., & Fahey, É. (2018). *Job stress and working conditions: Ireland in comparative perspective*. ESRI Research Series, n.84

- Sanne, B., Mykletun, A., Dahl, A. A., Bente, E. M., & Tell, G. S. (2005). Testing the job demand-control-support model with anxiety and depression as outcomes: The Hordaland Health Study. *Occupational Medicine*, 55(6), 463–473. <https://doi.org/10.1093/occmed/kqi071>
- Sarracino, F., & O'Connor, K. J. (2022). Neo-humanism and COVID-19: Opportunities for a socially and environmentally sustainable world. *Applied Research in Quality of Life*, 9, 1–33. <https://doi.org/10.1007/s11482-022-10112-5>
- Sayer, L. C., & Gornick, J. C. (2012). Cross-national variation in the influence of employment hours on child care time. *European Sociological Review*, 28, 421–442.
- Sharma, R. R., Chawla, S., & Karam, C. M. (2021). Global gender gap index. In *Handbook on diversity and inclusion indices: A research compendium* (Vol. 10, p. 150). World Economic Forum Perspective.
- Sloane, P., & William, H. (2000). Job satisfaction, comparison earnings and gender. *Labour*, 14(3), 473–501.
- Smith, A. (2000). The scale of perceived occupational stress. *Occupational Medicine*, 50(5), 294–298.
- Sostero, M., Milasi, S., Hurley, J., Fernández-Macías, E., & Bisello, M. (2020). *Teleworkability and the COVID-19 crisis: A new digital divide?* JRC-121193, European Commission, Seville.
- Steidelmüller, C., Meyer, S. C., & Müller, G. (2020). Home-based telework and presenteeism across Europe. *Journal of Occupational and Environmental Medicine*, 62(12), 998–1005.
- Step toe, A., & Willemsen, G. (2004). The influence of low job control on ambulatory blood pressure and perceived stress over the working day in men and women from the Whitehall II cohort. *Journal of Hypertension*, 22(5), 915–920.
- Thulin, E., Vilhelmson, B., & Johansson, M. (2019). New telework, time pressure, and time use control in everyday life. *Sustainability*, 11, 3067.
- Tutz, G. (2012). *Regression for categorical data*. Cambridge University Press.
- United Nations General Assembly. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. A/RES/70/1.
- Urzi Brancati, M. C., Pesole, A., & Fernandez Macias, E. (2020). New evidence on platform workers in Europe. *Publications Office of the European Union, Luxembourg*. <https://doi.org/10.2760/459278>
- Van Dyne, L., Kossek, E., & Lobel, S. (2007). Less need to be there: Cross-level effects of work practices that support work-life flexibility and enhance group processes and group-level OCB. *Human Relations*, 60(8), 1123–1154.
- van Zoonen, W., Sivunen, A., Blomqvist, K., Olsson, T., Ropponen, A., Henttonen, K., & Vartiainen, M. (2021). Factors influencing adjustment to remote work: Employees' initial responses to the covid-19 pandemic. *International Journal of Environmental Research and Public Health*, 18(13), 6966.
- Vargas Llave, O., & Weber, T. (2020). *Regulations to address work-life balance in digital flexible working arrangements*. Publications Office of the European Union.
- Vasumathi, A. (2018). Work life balance of women employees: A literature review. *International Journal of Services and Operations Management*, 29(1), 100–146.
- Vignoli, M., Guglielmi, D., Bonfiglioli, R. Y., & Violante, F. S. (2016). How job demands affect absenteeism? The mediating role of work-family conflict and exhaustion. *International Archives of Occupational and Environmental Health*, 89(1), 23–31.
- Vyas, L. (2022). “New normal” at work in a post-COVID world: Work-life balance and labor markets. *Policy and Society*, 41(1), 155–167.
- Welz, C., & Wolf, F. (2010). *Telework in the European Union*. European Foundation for the Improvement of Living and Working Conditions (Eurofound), Dublin.
- Williams, R. (2010). Fitting heterogeneous choice models with OGLM. *The STATA Journal*, 10(4), 540–567.
- Williams, R. (2011). Using heterogeneous choice models to compare logit and probit coefficients across groups. *Sociological Methods & Research*, 37, 531–559.
- World Economic Forum. (2012). *The workplace wellness alliance: Investing in a sustainable workforce*. Retrieved February 17, 2022, from <https://www.weforum.org/reports/workplace-wellness-alliance-investing-sustainable-workforce>
- World Health Organization. (2020). *Occupational health: Stress at the workplace*. Retrieved February 17, 2022, from <https://www.who.int/news-room/questions-and-answers/item/occupational-health-stress-at-the-workplace>
- Yaniv, G. (1995). Burnout, absenteeism, and the overtime decision. *Journal of Economic Psychology*, 16(2), 297–309.
- Yunus, S., & Mostafa, A. M. S. (2021). Flexible working practices and job-related anxiety: Examining the roles of trust in management and job autonomy. *Economic and Industrial Democracy*, 43(3), 1340–1368. <https://doi.org/10.1177/0143831X21995259>
- Zamarro, G., Perez-Arce, F., & Prados, M. J. (2021). Gender differences in the impact of COVID-19. *Review of Economics of the Household*, 19, 11–40.

Zamarro, G., & Prados, M. J. (2021). Gender differences in couples' division of childcare, work and mental health during COVID-19. *Review of Economics of the Household*, 19, 11–40.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.