

Smart working perception in banking companies' employees during the COVID-19 pandemic: A cross-sectional pilot study

Giuseppe La Torre^{a,*}, Marta Chiappetta^{a,1}, Elena Mazzalai^{a,1}, Riccardo Gresele^b, Gianromolo Bazzo^c, Giancarlo Pederzoli^d, Delfo Azzolin^e, Antonio Lo Izzo^f and Alice Mannocci^g

^a*Department of Public Health and Infectious Diseases, Sapienza University of Rome, Rome, Italy*

^b*Coordinamento Regionale Veneto Banche di Credito Cooperativo (BCC), Federazione Italiana Sindacale Lavoratori Assicurazione e Credito (FISAC) CGIL, Rovigo, Italy*

^c*Unione Italiana Lavoratori del Credito, Esattorie ed Assicurazioni, UILCA, Rome, Italy*

^d*Federazione Italiana Reti dei Servizi del Terziario (FIRST), CISL Alto Adige Trentino Veneto, Rome, Italy*

^e*Federazione Autonoma Bancari Italiani (FABI), Coordinamento Regionale Veneto Banca di Credito Cooperativo (BCC), Rome, Italy*

^f*PASS Italia srl, Bari, Italy*

^g*Faculty of Economics, Universitas Mercatorum, Rome, Italy*

Received 31 August 2021

Accepted 23 May 2022

Abstract.

BACKGROUND: The COVID-19 pandemic forced companies to make decisions to re-assess working-time and location in order to ensure business survival. The resorting to Smart Working (SW) has been adopted to support business continuity, especially in the banking sector.

OBJECTIVE: This study aims at evaluating the attitude and opinions of the bank employees on SW, focusing on the demographic, social and occupational characteristics of the respondents.

METHODS: A cross-sectional study was carried out to investigate the attitudes of the banking workers towards SW. The research was conducted from September 2020 to April 2021 through a validated questionnaire administered online.

RESULTS: The workers more interested in SW were younger than 45 years old ($p < 0.001$), with a high educational level ($p = 0.001$), and lived > 50 km away from the workplace ($p < 0.001$). Who reported an improved productivity was aged < 45 years, childless ($p < 0.001$), not married ($p = 0.004$).

Who thought that working in smart mode has penalized the teamwork was older than 45 years (OR = 1.39, 95% CI: 1.12-1.73), lived near the office (OR = 1.86, 95% CI: 1.16-2.99).

CONCLUSIONS: SW could help finding a balance between private and working life, modifying the traditional working activity. However, it could enhance the risk of social isolation, impacting negatively on the working motivation. Establishing good practices on SW could be useful in the short-term to improve the time-management, focus better on work, and prevent possible psychological consequences on banking workers.

Keywords: Observational study, working from home, technostress, work-life balance, wellbeing

¹These authors have contributed equally to this work.

*Address for correspondence: Giuseppe La Torre, Department of Public Health and Infectious Diseases, Sapienza University

of Rome, Piazzale Aldo Moro 5, 00185 Rome, Italy. E-mail: Giuseppe.latorre@uniroma1.it.

1. Introduction

During the evolution of the SARS-CoV2 (COVID-19) pandemic, following the total lockdown established in Italy in March 2020 [1], Smart Working (SW) has been recommended in the phases of highest incidence of contagions [1–3]. SW corresponds to non-conventional organisational models that, thanks to modern technologies, are characterised by higher flexibility and autonomy in the choice of working spaces, time and tools, providing the employees with the best working conditions to accomplish professional tasks [4]. In the last years, and especially during the current health emergency, many different kinds of flexible work have been implemented without regulation, adopted as substitute working modes [5].

Especially at the beginning of the pandemic, during the first (Spring 2000) and the second (Autumn 2020) waves, many governments introduced working home quarantine to prevent the spread of SARS-CoV-2, and this led to a decrease in consumption, stopped movement both internally and externally, and a consequent crisis in several sectors, such as including tourism, production, and services, small and medium factories [6]. However, in these periods, the organizational justice determined by the remote work has been an issue, and has been taken in place considering both Ethical elements and Job satisfaction of workers [7], both in private and public sectors.

According to Sontel data, the relevance of *remote working* in Italy has raised significantly during the pandemic period: the percentage of companies declaring to have resorted to it went from 28.7% in 2019 to 82.3% in 2020 [8]. During the COVID-19 emergency SW became merely Working from Home (WfH), enabling to preserve safety of both workers and clients and ensuring business continuity. One of the professional sectors that, even before the outbreak of the pandemic, was resorting to SW is the banking one, in an attempt of transforming the overall bank activity in a smarter and more flexible direction [9, 10]. These previous experiences helped the sector reacting promptly and efficiently to the COVID-19 emergency and the process of transition of SW, that is crucial to reduce workplace presence at the office without consequences on the provision of professional services [10].

Positive effects related to the implementation of SW do exist: higher efficiency at work, better concentration on the job, reduction of psychological

stress and a better work-life balance [11–13]. On the other hand, the overlapping between work and family life [14], the social isolation and a reduction in the amount of free-time for personal activities have been detected [13, 15]. The effectiveness of agile work is also influenced by the organization of the physical space, which makes it possible to separate work from the family environment [16, 17]. These elements can have an impact on the life-balance and subsequently on bank workers' health, although scientific literature is lacking of studies evaluating the bank workers' perception of SW/WfH and its impact on their lives. In year 2016 Mannocci et al. [18] analysed the level of stress among bank workers in Italy, showing an increase in the levels of stress among these workers. Exposure to stress factors can be associated to unhealthy habits, poor mental and physical health, with potential heavy consequences in terms of public health [19, 20].

This study aims at evaluating the attitude and opinions of the bank employees on SW, focusing on the demographic, social and occupational characteristics of the respondents such as gender, age, marital status, educational level and professional classification.

2. Methods

A cross-sectional study, according to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement [21], was carried out (Table 1). The research was conducted from September 2020 to April 2021.

2.1. Sample

The setting of the study was the banking sector. The institutes involved in the survey were different, both small local and bigger national firms, and the employees involved could perform as cashiers, commercials or in both roles. The potential participants were contacted via e-mail using a mailing list provided by the labour unions (CISL, UILA, FISAC, FIRST, CGIL, UILCA and FABI).

2.2. Tool

The research tool was an online questionnaire on Smart Working (SWQ) developed by Mascagna et al. [5], validated by Chiappetta et al. [22] and administered anonymously via e-mail.

Table 1
STROBE checklist

	Item No	Recommendation	Reported on page #
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found	NA 1
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	2
Objectives	3	State specific objectives, including any prespecified hypotheses	2
Methods			
Study design	4	Present key elements of study design early in the paper	3
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	3
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants	3
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	3-4
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	3-4
Bias	9	Describe any efforts to address potential sources of bias	3-4
Study size	10	Explain how the study size was arrived at	3
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	4
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to examine subgroups and interactions (c) Explain how missing data were addressed (d) If applicable, describe analytical methods taking account of sampling strategy (e) Describe any sensitivity analyses	4 4 4 NA NA
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed pag.3 (b) Give reasons for non-participation at each stage (c) Consider use of a flow diagram	4 NA NA
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders (b) Indicate number of participants with missing data for each variable of interest	4-5 4
Outcome data	15*	Report numbers of outcome events or summary measures	5
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included pag. (b) Report category boundaries when continuous variables were categorized (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	5 NA NA
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	5-6 and tables 2a,2b,3a,3b,4
Discussion			
Key results	18	Summarise key results with reference to study objectives	8-9-10
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	11
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	8-9-10
Generalisability	21	Discuss the generalisability (external validity) of the study results	9-10
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	12

*Give information separately for exposed and unexposed groups. **Note:** An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at www.strobe-statement.org.

A total number of 30 questions were included, divided in two sections: the first one focuses on the socio-demographic characteristics of the sample, the second investigates the perception and attitude of the workers towards the following seven different aspects of Smart Working: general characteristics, feasibility, motivations, costs, performance, career and companies' support.

2.3. Statistics analysis

Statistical analysis was performed using SPSS 25 for Windows. 17 items of the SWQ were considered as outcomes in the study (see first column of Table 2a). The qualitative variables were described as frequencies and percentages and recoded into dummy variables if needed.

To evaluate the possible associations between outcomes and categorical covariates, the Chi-square test or the Fisher's Exact test were used. Binary logistic regression models were built to assess associations of demographic and working variables with 17 items of the SWQ. The items were considered as independent variables in the models. The Odds Ratios (ORs) with corresponding 95% Confidence Intervals (95% CI) were calculated in order to estimate the odds of agreement with the SWQ items. Stepwise with backward elimination of non-significant variables (probability to entry $p < 0.05$) was subsequently used to generate a minimal model (last model). The goodness of fit for the models was assessed with Hosmer and Lemeshow's test (H-L) [23]. All calculations were made at a level of significance of $p < 0.05$.

3. Results

3.1. Description of the sample

A total number of 4850 emails were sent to bank employees with three reminders. A total number of 1588 questionnaires were collected. Since the answer to each question was mandatory to complete the questionnaire, there were no missing data. 54% of the studied subjects were male, 57% aged more than 45 years, 64% were married, 70% with children and 40% had a high educational level (higher than high school). Considering working aspects, 87% had a full-time occupation and 93% of the respondents lived closer than 50 kilometres from the workplace.

3.2. Univariate analysis

In Tables 2a and 2b the univariate analysis is reported.

Respondents who declared "I'm interested in the smart way of working" were female ($p < 0.001$), aged < 45 years ($p < 0.001$), with a high educational level ($p = 0.001$), a part-time contract ($p = 0.021$), and lived more than 50 km away from workplace ($p \leq 0.001$).

Who thought "that working in smart mode can penalize the size of teamwork" was ≥ 45 years old ($p < 0.001$), with a high school licence ($p = 0.029$), and lived < 50 km away from the workplace ($p < 0.005$).

Employees saying that working away from the workplace could somehow complicate their work were older than 45 years ($p = 0.005$) and lived less than 50 km away from the workplace ($p = 0.014$).

Workers saying "Compared to my job role, I think that it is feasible to work in "smart" mode for a certain number of hours a week" were female ($p = 0.011$), with a high educational level ($p < 0.001$) and lived more than 50 km away from the workplace ($p = 0.025$).

Who thought that "working in "smart" mode can be more difficult at certain times of the year" was female ($p < 0.001$) and < 45 years old ($p = 0.010$).

The respondents saying that "agile work can make it more difficult to deal with your customers/users" were more often parents ($p = 0.017$), with a high school license ($p = 0.001$), a full-time job ($p = 0.046$) and lived less than 50 km away from the workplace ($p = 0.004$).

Workers aged less than 45 years, with a high education level, a part-time job and living more than 50 km away from the workplace agreed with the statement saying "I think that smart working can improve the reconciliation between my working life and my private life" (respectively: $p < 0.001$, $p < 0.001$, $p = 0.026$, $p = 0.031$).

Who said that "smart working can improve the management of my work" was younger than 45 years old ($p < 0.001$), not married ($p < 0.001$), without children ($p < 0.001$), and lived less than 50 km away from the workplace ($p = 0.026$).

Respondents answering that "smart working can improve the quality of my life" were younger than 45 years old, with a high level of education and lived less than 50 km away from the workplace ($p < 0.001$).

"I think that working in smart mode can have a medium-long term effect on my workplace mobility

Table 2a
Univariate analyses stratifying by sociodemographic variables, professional classification and distance from workplace

Items	Gender		Age		Civil status		To be a parent		Level of education		Professional classification		Distance from work	
	Males N (%)	Females N (%)	<45 yrs N(%)	≥45 yrs N(%)	Not Married N(%)	Married N(%)	No N(%)	Yes N(%)	High school licensed N(%)	Higher level N(%)	Part-time N(%)	Full-time N(%)	<50km N(%)	≥50km N(%)
D11. I'm interested to the "smart" way of working	654 (76)	606 (84)	577 (85)	683 (75)	451(79)	809 (80)	376 (81)	884 (80)	737 (77)	523 (84)	176 (85)	1084 (78)	1157 (78)	103 (92)
P*	<0.001		<0.001		0.805		0.757		0.001			0.021	0.001	
D12. I think that working in "smart" mode can penalize the size of teamwork	314 (36)	264 (37)	209 (31)	369 (41)	201 (36)	377(37)	169 (36)	409 (37)	371 (39)	207 (33)	71 (35)	507 (37)	551 (37)	27(24)
P*	0.930		<0.001		0.585		0.781		0.029			0.537	0.005	
D13. I think that working away from the workplace can complicate your work properly in some way	267(31)	224(31)	185 (27)	306(34)	162 (29)	329 (32)	133 (28)	358 (32)	311 (32)	180 (29)	62 (30)	429 (31)	468 (32)	23 (21)
P*	0.961		0.005		0.140		0.133		0.141			0.784	0.014	
D14. Compared to my job role, I think that it is feasible to work in "smart" mode for a certain number of hours a week	684 (79)	608 (84)	556 (82)	736 (81)	455 (80)	837 (82)	385 (82)	907 (81)	751 (78)	541 (87)	176 (859)	1116 (81)	1192 (81)	100 (89)
P*	0.011		0.801		0.459		0.800		<0.001			0,107	0.025	
D15. I think that working in "smart" mode can be more difficult at certain times of the year	136 (16)	165 (23)	149 (22)	152 (17)	104 (18)	197 (19)	92 (20)	209 (19)	180 (19)	121 (19)	33 (16)	268 (19)	284 (19)	17 (15)
P*	<0.001		0.010		0.661		0.703		0.740			0.249	0.290	
D16. I think that agile work can make it more difficult to deal with your customers/users	326 (38)	243 (34)	236 (35)	333 (37)	185 (33)	384 (38)	148 (31)	421 (38)	377 (39)	192 (31)	61 (30)	508 (37)	543 (37)	26 (23)
P*	0.091		0.397		0.052		0.017		0.001			0.046	0.004	
D18. I think that smart working can improve the reconciliation between my working life and my private life	665 (77)	582 (81)	581 (85)	666 (73)	453 (80)	794 (78)	370 (79)	877 (79)	726 (75)	521 (83)	174 (85)	1073 (78)	1150 (79)	97 (87)
p	0.080		<0.001		0.276		0.985		<0.001			0.026	0.031	
D19. I think that smart working can improve the management of my work	495 (57)	424 (59)	445 (65)	474(52)	367 (65)	552 (54)	307 (65)	612 (55)	539 (56)	380 (61)	126 (61)	793 (57)	843 (57)	76 (68)
p	0.568		<0.001		<0.001		<0.001		0.057			0.305	0.026	
D20. I think that smart working can improve the quality of my life	636 (74)	553 (77)	556 (82)	633 (70)	440 (78)	749 (73)	365 (78)	824 (74)	688 (71)	501 (80)	103 (79)	1026 (74)	1089 (74)	100 (89)
p	0.176		<0.001		0.050		0.118		<0.001			0.131	<0.001	

*p-value of chi-square test; Bold: $p < 0.005$.

Table 2b
Univariate analyses stratifying by sociodemographic variables, professional classification and distance from workplace

Items	Gender		Age		Civil status		To be a parent		Level of education		Professional classification		Distance from work	
	Males N (%)	Females N (%)	<45 yrs N(%)	≥45 yrs N(%)	Not Married N(%)	Married N(%)	No N(%)	Yes N(%)	High school N(%)	Higher level N(%)	Part-time N(%)	Full-time N(%)	<50 km N(%)	≥50 km N(%)
D21. I think that working in smart mode can have a medium-long term effect on my workplace mobility costs	697 (81)	171 (24)	564 (83)	685 (76)	445 (79)	804 (79)	372 (79)	877 (79)	761 (79)	488 (78)	156 (76)	1093 (879)	1144 (78)	105 (94)
P*	0.041		<0.001		0.982		0.836		0.654		0.272		<0.001	
D22. I think that working in “smart” working can have a medium-long term effect on the costs that the company as a whole faces	647 (75)	523 (72)	502 (74)	668 (874)	417 (74)	753 (74)	354 (75)	816 (73)	686 (71)	484 (77)	153 (74)	1017 (74)	1084 (73)	86 (77)
P*	0.268		0.977		0.999		0.384		0.006		0.836		0.438	
D23. I think that working in “smart” working mode can help me achieve my business goals more efficiently	378 (44)	304 (42)	336 (49)	346 (38)	274 (48)	408 (40)	236 (50)	446 (40)	377 (39)	305 (49)	96 (47)	586 (42)	618 (42)	64 (57)
P*	0.508		<0.001		<0.001		<0.001		<0.001		0.256		0.002	
D24. I think that the working mode in smart working can help me take less hours of leave/to do less work absences	477 (55)	453 (63)	454 (67)	476 (53)	351 (62)	579 (57)	273 (58)	657 (59)	540 (56)	390 (62)	129 (63)	801 (58)	849 (58)	81 (72)
P*	0.002		<0.001		0.038		0.752		0.012		0.205		0.002	
D25. I think that the adoption of this working method could be useful to improve my performance within the company	485 (56)	403 (56)	440 (65)	448 (49)	344 (61)	544 (53)	287 (61)	601 (54)	502 (52)	386 (62)	124 (60)	764 (55)	888 (56)	79 (71)
P*	0.895		<0.001		0.004		0.009		<0.001		0.185		0.001	
D26. I believe that the adoption of this working method can be useful to improve the performance of everyone within the company	503 (58)	392 (54)	441 (65)	454 (50)	338 (60)	557 (55)	297 (63)	598 (54)	512 (53)	383 (61)	115 (56)	780 (56)	812 (55)	83 (74)
P*	0.116		<0.001		0.045		<0.001		0.001		0.868		<0.001	
D27. I think that the adoption of this working method could be useful to increase company profits	579 (67)	470 (65)	470 (69)	579 (64)	396 (70)	653 (64)	327 (699)	722 (65)	614 (64)	435 (70)	143 (69)	906 (66)	962 (65)	87 (78)
P*	0.419		0.031		0.014		0.066		0.016		0.275		0.007	
D28. I think that “smart” work can foster me career progression within my company	39 (5)	43 (6)	55 (89)	27 (3)	41 (7)	41 (4)	32 (7)	50 (5)	41 (4)	41(7)	8 (4)	74 (5)	74 (5)	8 (7)
P*	0.197		<0.001		0.005		0.057		0.043		0.373		0.326	
D29. If my company decides to adopt smart working, I consider it useful to attend an ad hoc training course	306 (35)	246 (34)	244 (36)	308 (34)	206 (36)	346 (34)	168 (36)	384 (34)	322 (33)	230 (37)	73 (35)	479 (35)	511 (35)	41 (37)
P*	0.573		0.438		0.309		0.622		0.169		0.827		0.670	
D30. After the COVID-19 emergency, I think it will be appropriate to carry out smart working again	352 (41)	345 (48)	270 (40)	427 (47)	273 (48)	424 (42)	217 (46)	480 (43)	385 (40)	312 (50)	116 (56)	581 (42)	643 (44)	54 (48)
P*	0.005		0.003		0.009		0.256		<0.001		<0.001		0.339	

*p-value of chi-square test; bold: $p < 0.005$.

costs” was said by males ($p=0.041$), workers aged less than 45 years ($p<0.001$) and living more than 50 km away from the office ($p<0.001$).

“I think that working in smart working mode can help me achieve my business goals more efficiently” was said by workers aged less than 45 years, not married, childless, with a high education level ($p<0.001$ each) and living more than 50 km away from the workplace ($p=0.002$).

Who stated that “the working mode in Smart Working can help me take less hours of leave/to do less work absences” was female ($p=0.002$), aged < 45 years ($p<0.001$), not married ($p=0.038$), with a high education level ($p=0.012$) and lived more than 50 km away from the workplace ($p=0.002$).

Respondents thinking that “the adoption of this working method could be useful to improve my performance within the company” were aged < 45 years, with a high education level ($p<0.001$), not married ($p=0.004$), childless ($p=0.009$) and lived more than 50 km away from the workplace ($p=0.001$).

Who believed that “the adoption of this working method can be useful to improve the performance of everyone within the company” was aged < 45 years, childless and lived more than 50 km away from the workplace ($p<0.001$).

Employees who thought that “the adoption of this working method could be useful to increase company profits” were aged less than 45 years ($p=0.031$), with a high level of education ($p=0.016$) and lived more than 50 km away from the workplace ($p=0.007$).

Workers aged less than 45 years ($p<0.001$), not married ($p=0.005$) and with a higher education level ($p=0.043$) agreed with the following item: “I think that “smart” work can foster me career progression within my company”.

“After the COVID-19 emergency, I think it will be appropriate to carry out smart working again” was said by workers who were female, aged ≥ 45 years old, not married, with a higher education level and a part-time job ($p=0.005$, $p=0.003$, $p=0.009$, $p<0.001$, $p<0.001$, respectively).

3.3. Multivariate analysis

In Tables 3a and 3b the binary logistic regression models are shown. H-L p -values are shown in Table 4.

The workers who were significantly more interested in SM were female (OR=1.71; 95%CI: 1.24-2.07), while the employees aged > 45 years (OR=0.59; 95%CI: 0.45-0.77), with lower educational level (OR=0.73; 95%CI: 0.56-0.95) and with

a home-work distance < 50 km (OR=0.28; 95%CI: 0.14-0.56) did not declare an interest in SW (H-L p -value was 0.649).

Who referred that SW had not improve their quality of life was older than 45 years (OR = 0.54 95%CI: 0.43-0.70), with lower educational level (OR = 0.69; 95%CI: 0.54-0.89) and lived near the workplace (OR=0.30; 95%CI: 0.16-0.56) (H-L p -value was 0.330).

Who thought that working in smart mode was penalizing and complicated for the teamwork was older than 45 years (OR = 1.39, 95% CI: 1.12-1.73 and OR = 1.58, 95%CI: 1.28-1.95 respectively), lived near the office (OR = 1.86, 95% CI: 1.16-2.99 and OR = 1.98, 95% CI: 1.26-3.10) (H-L p -values were 0.995 and 0.971 respectively).

Concerning the reduction of absence from work, who considered SW as an aid to contain the work-shifts was female (OR = 1.31; 95%CI: 1.06-1.60) and with children (OR = 1.34, 95% CI: 1.03-1.73). Older workers (OR=0.54; 95%CI: 0.44-0.67), married (OR = 0.75; 95%CI: 0.59-0.96) and with home-work distance < 50 km (OR = 0.46; 95%CI: 0.30-0.71) did not believe SW to be helpful in containing work-shifts (H-L p -value was 0.166).

The respondents that did not agree with the item “I think that the adoption of this working method could be useful to improve my performance within the company” were aged over 45 years (OR = 0.57; 95%CI: 0.46-0.70), married (OR = 0.9; 95% CI: 0.64-0.98), with lower education level (OR = 0.77; 95%CI: 0.62-0.95), living near the workplace (OR = 0.46; 95% CI: 0.30-0.70) (H-L p -value was 0.998).

Those who declared themselves against the item “I think that working in smart mode can have a medium-long term effect on my workplace mobility costs” were female (OR = 0.76; 95%CI: 0.60-0.97), aged ≤ 45 years (OR = 0.60; 95%CI: 0.47-0.78) and lived near the office (OR = 0.22; 95%CI: 0.10-0.48) (H-L p -value was 0.992).

Who did not report SW to improve reconciliation between private and working life was older (OR=0.51; 95%CI: 0.39-0.66), with lower educational level (OR=0.71; 95%CI: 0.55-0.93), a full-time working position (OR = 0.66; 95%CI: 0.44-0.99) and lived near the workplace (OR=0.48; 95%CI: 0.27-0.85) (H-L p -value was 0.977).

Respondents who answered no when asked if SW was helpful for career progression were older (OR=0.37; 95%CI: 0.23-0.60) and married (OR=0.60; 95%CI: 0.38-0.94) (H-L p -value was 0.808).

Table 3a
Binary logistic multivariate regression models

Dependent variable	Covariates in the model													
	Gender female		Age over 45 yrs		Being married		To be a parent		High school licensed		Full time		Home-Work distance < 50km	
	OR [^] (95%CI)	OR* (95%CI)	OR [^] (95%CI)	OR* (95%CI)	OR [^] (95%CI)	OR* (95%CI)	OR [^] (95%CI)	OR* (95%CI)	OR [^] (95%CI)	OR* (95%CI)	OR [^] (95%CI)	OR* (95%CI)	OR [^] (95%CI)	OR* (95%CI)
D11. I'm interested to the "smart" way of working	1.53 (1.17-2.01)	1.71 (1.24-2.07)	0.59 (0.45-0.77)	0.59 (0.45-0.77)	1.04 (0.77-1.40)		1.04 (0.76-1.43)		0.73 (0.56-0.95)	0.73 (0.56-0.95)	0.80 (0.51-1.24)			0.28 (0.14-0.56)
D12. I think that working in "smart" mode can penalize the size of teamwork	1.08 (0.86-1.34)		1.55 (1.24-1.93)	1.58 (1.28-1.95)	1.05 (0.82-1.34)		0.92 (0.71-1.20)		1.17 (0.94-1.46)				2.00 (1.28-3.14)	1.98 (1.26-3.10)
D13. I think that working away from the workplace can complicate your work properly in some way	1.05 (0.83-1.32)		1.33 (1.06-1.67)	1.39 (1.12-1.73)	1.11 (0.86-1.44)		1.07 (0.81-1.42)		1.10 (0.87-1.38)		1.09 (0.77-1.54)		1.88 (1.7-3.01)	1.86 (1.16-2.99)
D14. Compared to my job role, I think that it is feasible to work in "smart" mode for a certain number of hours a week	1.33 (1.01-1.76)	1.36 (1.05-1.76)	1.11 (0.85-1.46)	0.55 (0.42-0.74)	1.20 (0.88-1.62)		0.90 (0.65-1.25)		0.54 (0.41-0.72)		0.84 (0.54-1.31)		0.48 (0.26-0.89)	0.47 (0.26-0.88)
D15. I think that working in "smart" mode can be more difficult at certain times of the year	1.74 (1.33-2.27)	1.73 (1.32-2.25)	0.73 (0.56-0.95)	0.742 (0.58-0.96)	1.18 (0.87-1.60)		0.95 (0.69-1.32)		1.06 (0.81-1.38)		1.71 (1.12-2.60)	1.68 (1.11-2.54)	1.28 (0.75-2.19)	
D16. I think that agile work can make it more difficult to deal with your customers/users	0.91 (0.72-1.13)		0.96 (0.78-1.20)		1.11 (0.87-1.42)		1.26 (0.97-1.65)	1.32 (1.05-1.68)	1.41 (1.27-1.76)	1.41 (1.14-1.75)	1.39 (0.99-1.96)	1.46 (1.06-2.02)	2.02 (1.28-3.18)	2.01 (1.28-3.16)
D18. I think that smart working can improve the reconciliation between my working life and my private life	1.07 (0.82-1.38)		0.50 (0.38-0.65)	0.51 (0.39-0.66)	0.87 (0.65-1.17)		1.22 (0.90-1.66)		0.71 (0.54-0.92)	0.71 (0.55-0.93)	0.71 (0.46-1.08)	0.66 (0.44-0.99)	0.48 (0.27-0.84)	0.48 (0.27-0.85)
D19. I think that smart working can improve the management of my work	0.97 (0.78-1.21)		0.62 (0.50-0.76)	0.61 (0.49-0.75)	0.73 (0.57-0.93)	0.73 (0.57-0.93)	0.81 (0.62-1.05)	0.83 (0.64-1.07)	0.95 (0.77-1.18)		0.79 (0.57-1.10)		0.58 (0.38-0.88)	0.59 (0.39-0.89)
D20. I think that smart working can improve the quality of my life	1.04 (0.81-1.34)		0.56 (0.43-0.729)	0.54 (0.43-0.70)	0.85 (0.64-1.12)		0.99 (0.74-1.35)		0.71 (0.55-0.91)	0.69 (0.54-0.89)	0.79 (0.53-1.16)		0.30 (0.16-0.55)	0.30 (0.16-0.56)

[^]OR in the first step of the stepwise backward elimination with backward procedure. *OR in the last model of the stepwise backward elimination with backward procedure.

Table 3b
Binary logistic multivariate regression models

Dependent variable	Covariates in the model													
	Gender female		Age over 45 yrs		Being married		To be a parent		High school licensed		Full time		Home-Work distance < 50km	
	OR [^]	OR*	OR [^]	OR*	OR [^]	OR*	OR [^]	OR*	OR [^]	OR*	OR [^]	OR*	OR [^]	OR*
	(95%CI)	(95%CI)	(95%CI)	(95%CI)	(95%CI)	(95%CI)	(95%CI)	(95%CI)	(95%CI)	(95%CI)	(95%CI)	(95%CI)	(95%CI)	(95%CI)
D21. I think that working in smart mode can have a medium-long term effect on my workplace mobility costs	0.78 (0.60-1.01)	0.76 (0.60-0.97)	0.58 (0.45-0.759)	0.60 (0.47-0.78)	1.01 (0.75-1.35)		1.08 (0.79-1.47)		1.14 (0.88-1.47)		1.07 (0.74-1.56)		0.22 (0.10-0.49)	0.22 (0.10-0.48)
D22. I think that working in “smart” working can have a medium-long term effect on the costs that the company as a whole faces	0.85 (0.66-1.07)	0.86 (0.68-1.07)	1.07 (0.85-1.36)		0.89 (0.66-1.18)		0.71 (0.55-0.90)		0.88 (0.61-1.27)	0.71 (0.56-0.90)	0.83 (0.53-1.32)		0.83 (0.53-1.32)	
D23. I think that working in “smart” working mode can help me achieve my business goals more efficiently	0.84 (0.67-1.04)		0.69 (0.56-0.86)	0.69 (0.56-0.86)	0.82 (0.65-1.05)		0.78 (0.60-1.01)	0.73 (0.58-0.91)	0.75 (0.61-0.93)	0.75 (0.61-0.92)	0.72 (0.52-1.00)		0.50 (0.34-0.74)	0.50 (0.34-0.75)
D24. I think that the working mode in smart working can help me take less hours of leave/to do less work absences	1.29 (1.04-1.61)	1.31 (1.06-1.60)	0.56 (0.45-0.69)	0.54 (0.44-0.67)	0.75 (0.59-0.96)	0.75 (0.59-0.96)	1.35 (1.04-1.75)	1.34 (1.03-1.73)	0.88 (0.71-1.09)		0.99 (0.71-1.38)		0.46 (0.30-0.71)	0.46 (0.30-0.71)
D25. I think that the adoption of this working method could be useful to improve my performance within the company	0.87 (0.70-1.08)		0.57 (0.46-0.70)	0.57 (0.46-0.70)	0.81 (0.63-1.039)	0.9 (0.64-0.98)	0.92 (0.71-1.199)		0.77 (0.62-0.959)	0.77 (0.62-0.95)	0.75 (0.54-1.04)		0.46 (0.30-0.70)	0.46 (0.30-0.70)
D26. I believe that the adoption of this working method can be useful to improve the performance of everyone within the company	0.79 (0.63-0.98)	0.81 (0.66-0.99)	0.57 (0.46-0.70)	0.57 (0.46-0.70)	0.97 (0.76-1.23)		0.77 (0.59-1.00)	0.77 (0.61-0.97)	0.81 (0.65-1.00)	0.81 (0.65-0.99)	0.87 (0.63-1.21)		0.39 (0.25-0.61)	0.40 (0.25-0.61)
D27. I think that the adoption of this working method could be useful to increase company profits	0.84 (0.67-1.05)		0.84 (0.67-1.05)		0.79 (0.62-1.02)	0.77 (0.62-0.96)	0.93 (0.71-1.22)		0.81 (0.64-1.01)	0.78 (0.62-0.96)	0.74 (0.53-1.04)		0.51 (0.32-0.82)	0.52 (0.33-0.83)
D28. I think that “smart” work can foster me career progression within my company	1.36 (0.85-2.17)		0.38 (0.23-0.63)	0.37 (0.23-0.60)	0.61 (0.36-1.03)	0.60 (0.38-0.94)	1.06 (0.61-1.83)		0.82 (0.52-1.309)		1.60 (0.73-3.50)		0.60 (0.28-1.30)	
D29. If my company decides to adopt smart working, I consider it useful to attend an ad hoc training course	0.91 (0.73-1.14)		0.95 (0.76-1.18)		0.90 (0.76-1.189)	0.91 (0.73-1.12)	1.02 (0.78-1.33)		0.87 (0.70-1.09)	0.87 (0.70-1.08)	0.92 (0.66-1.29)		0.91 (0.61-1.35)	
D30. After the COVID-19 emergency, I think it will be appropriate to carry out smart working again	1.19 (0.95-1.47)		1.64 (1.32-2.03)	1.61 (1.30-2.00)	0.75 (0.59-0.96)	0.72 (0.58-0.89)	0.91 (0.70-1.18)		0.63 (0.51-0.78)	0.62 (0.50-0.77)	0.58 (0.42-0.80)	0.54 (0.40-0.73)	0.80 (0.54-1.19)	

[^]OR in the first step of the stepwise backward elimination with backward procedure. *OR in the last model of the stepwise backward elimination with backward procedure.

Table 4
Goodness of fit of the models

Dependent variable of the model	Hosmer and Lemeshow test of the last models (Tables 3a-b)
D11. I'm interested to the "smart" way of working	0.649
D12. I think that working in "smart" mode can penalize the size of teamwork	0.995
D13. I think that working away from the workplace can complicate your work properly in some way	0.971
D14. Compared to my job role, I think that it is feasible to work in "smart" mode for a certain number of hours a week	0.689
D15. I think that working in "smart" mode can be more difficult at certain times of the year	0.452
D16. I think that agile work can make it more difficult to deal with your customers/users	0.505
D18. I think that smart working can improve the reconciliation between my working life and my private life	0.977
D19. I think that smart working can improve the management of my work	0.058
D20. I think that smart working can improve the quality of my life	0.330
D21. I think that working in smart mode can have a medium-long term effect on my workplace mobility costs	0.992
D22. I think that working in "smart" working can have a medium-long term effect on the costs that the company as a whole faces	0.526
D23. I think that working in "smart" working mode can help me achieve my business goals more efficiently	0.050
D24. I think that the working mode in smart working can help me take less hours of leave/to do less work absences	0.166
D25. I think that the adoption of this working method could be useful to improve my performance within the company	0.792
D26. I believe that the adoption of this working method can be useful to improve the performance of everyone within the company	0.146
D27. I think that the adoption of this working method could be useful to increase company profits	0.999
D28. I think that "smart" work can foster me career progression within my company	0.808
D29. If my company decides to adopt smart working, I consider it useful to attend an ad hoc training course	0.938
D30. After the COVID-19 emergency, I think it will be appropriate to carry out smart working again	0.598

The employees that did not consider the adoption of SW to be useful to improve their performance within the company were older (OR = 0.57; 95%CI: 0.46-0.70), married (OR = 0.9; 95%CI: 0.64- 0.98), with lower educational level (OR = 0.77; 95%CI: 0.62-0.95) and living near the office (OR = 0.46; 95%CI: 0.30-0.70) (H-L *p*-value was 0.792).

Who mentioned the feasibility to do certain number of hours per week in SW was female (OR = 1.36; 95%CI: 1.05-1.76), while older workers (OR = 0.55; 95%CI: 0.42-0.74) and who lived close to the workplace (OR = 0.47; 95%CI: 0.26-0.88) answered negatively (H-L *p*-value was 0.689).

4. Discussion

The results underline that SW could increase the chance for workers to find a balance between work and private life, particularly for younger people, who lived far from the office and the once with a part-time job. On the other hand, people older than 45 years, with lower educational level and living near the workplace are in general less favourable to SW/WfH.

Focusing on the individual and company's perceived productivity, younger employees, with a higher level of education, single, childless and living more than 50 km away from the office are those reporting an improvement in productivity. Unsurprisingly, people with children, which stayed at home due to the school closure during the pandemic, complained of a decrease in productivity. However, the literature points out how the impact of children at home varies depending on their age. If taking care of an infant is considered a major distraction, having a teenager that can help with household tasks boosting the productivity [24].

The respondents showing an overall higher propensity for SW were those living more than 50 km away from the office. It has been detected that commuters use the time previously occupied by the trip to the workplace to integrate their hours of sleep, with an overall gain in terms of wellbeing [25, 26].

Conversely, our study shows that older workers, who lived near the office and the ones with a lower educational level seemed to be more reluctant towards this new digital practice. However, some studies highlight different findings [24]. Previous studies reported

heterogeneous feedbacks to WfH: a survey conducted among Austrian workers showed that the quality of life improved in a segment of this population (53%) and decreased in another one (43%). Likewise, reported productivity increased in 37% of the cases and decreased for 67% of the respondents [25]. Moretti et al. [27] showed that 39% of the subjects doing SW perceived themselves to be less productive, but 51% were equally satisfied. Hallmann as well underlines how 34.6% of workers working from home reported an increased well-being, while 34.4% described a worse condition [26].

The main side effect of WfH is the contamination between daily life and working activities [28]. Hilbrecht et al. [12] highlight that the concurrence between work and personal life causes either an encroachment of working activities into the social and family sphere or an overlap between family concerns and daily working life. These issues can lead to a decrease in productivity. Moreover, while working from home, it is possible to feel a lack of structure, to struggle getting the working day going and following the established working shift, to take time for meals and personal activities, resulting in a radical change in the work-life balance [27]. This imbalance can increase the working strain and deteriorate the perceived well-being [29].

A shared opinion is the fact that SW jeopardizes the dimension of teamwork worsening the relationships among colleagues. Indeed, especially in the long run, the exchange of information via technology fails to compensate for the feeling of social isolation and the lack of face-to-face interactions [30–33], increasing risks of psychological backlashes [34], reducing performances and decreasing job satisfaction and commitment [35–38].

SW could introduce another negative phenomenon: the increase of *working hard*, i.e. spending more time and energies on the job, and the reduction of *working smart*, that is focusing on the results benefiting from a higher organisational freedom [39]. In fact, Golden et al. and colleagues [31] report that SW makes workers more satisfied with their jobs when the amount of it is not very high; whereas, when it goes above a certain threshold, the level of satisfaction does not increase. It is also recognized that a massive use of technology has an impact on workers, causing higher levels of anxiety and or depression [40] up to the onset of psychological and physical effects related to the so-called technostress syndrome [41]. Regarding the workers' physical health, some studies pointed out that WfH extends the working time that is

done on the computer and consequently significantly increases the sedentary time, causing several negative effects on physical and mental health [42, 43] and this has been especially true during the pandemic, with a diminish in the levels of physical activity [44, 45]. Moreover, the usage of non-ergonomic equipment with an unsuitable work station may increase musculoskeletal issues [27, 46–48].

Nevertheless, the role of flexibility on innovation regarding work processes is now recognized not only in the light of promoting work-life balance, but also to foster the productivity, the sustainability and the cost effectiveness within the organizations [30]. According to the McEwan's definition of SW [49], a regulation and identification of the different configurations of SW could be done, so that this new working model can be re-proposed even outside the emergency context.

This study analyzes the characteristics of the workers both against and favorable towards SW. Employees aged older than 45 years and those with a lower educational level had a lower propensity for SW. The generational gap is confirmed by the literature [32], and could find an explanation if considering the approach of the elderly generations to technological tools, which remains mainly related to their specific and known task [50]. Besides, these workers rely more on the sharing of expertise, which is less smooth with SW [51]. Who lived far from the workplace was more interested in SW for it helps to spare on mobility costs, to conciliate working and private life making the management of ones' own work easier and therefore improving the quality of their lives.

5. Limitations

We must acknowledge some limitations to this study. First of all, the response rate was not very high, and this could have had an impact on the completeness of the results. Secondly, our data have been collected during the COVID-19 pandemic, when the choice of SW has been not voluntary but compulsory. Therefore, respondents' attitude towards SW could have been influenced both by the new imposed working measures and the worries related to the unique emergency phase. Finally, the concept of agile work is broader than that carried out during the pandemic: SW is not merely working from home but also using other places to carry out one's own professional activity with a higher working-hour flexibility.

6. Conclusion

One cannot assume that, in the absence of the stimulus and control offered by the work environment, all workers are equally adequate to perform SW. Thus, the employers should be aware that some more vulnerable workers could be in need of additional structural and technological support [52]. Companies that want starting implementing SW should therefore consider not only the needed technologies but also the training to “enable” workers. This requires a cultural shift that cannot happen quickly: it may be necessary to train personal skills, such as those related to planning, and to provide guidance so that workers can learn how to better organize and manage a work environment that may be more uncertain and variable than the one they were used to in the office [53, 54]. Defining good practices and suggesting a routine on SW could be a need in the short-term; this strategy can help managing time, better focus on work and prevent stress-risk and psychological effects on bank workers and on employees of other sectors.

Ethical approval

Not required.

Informed consent

All participants gave their consent to participate in the survey. The study was carried out following the Declaration of Helsinki.

Conflict of interest

None to report.

Funding

This study did not receive any funding.

Data availability

The data underlying this article are contained in the article.

References

- [1] Presidenza del Consiglio dei Ministri. Decreto del Presidente del Consiglio dei Ministri 9 marzo 2020. 2020; Available from: <https://www.gazzettaufficiale.it/eli/id/2020/03/09/20A01558/sg>
- [2] Presidenza del Consiglio dei Ministri. Decreto del Presidente del Consiglio dei Ministri 10 aprile 2020. 2020; Available from: <https://www.gazzettaufficiale.it/eli/id/2020/04/11/20A02179/sg>
- [3] Presidenza del Consiglio dei Ministri. Decreto del Presidente del Consiglio dei Ministri 3 novembre 2020. 2020; Available from: <https://www.gazzettaufficiale.it/eli/id/2020/11/04/20A06109/sg>
- [4] Gastaldi L, Corso M, Raguseo E, Neirotti P, Paolucci E, Martini A. Smart working: Rethinking work practices to leverage employees' innovation potential. 2014.
- [5] Mascagna F, Izzo AL, Cozzoli LF, Torre GL. Smart working: validation of a questionnaire in the Italian reality. *Senses and Sciences* [Internet]. 2019;6(3). Available from: <https://sensesandsciences.com/index.php/Senses/article/view/169>
- [6] Garad, A., Budiyanto, G, & Ansi, A. Impact of covid-19 pandemic on the global economy and future prospects: A systematic review of global reports. *Journal of Theoretical and Applied Information Technology*. 2021;99: 1-15.
- [7] Hadi S, Tjahjono HK, Palupi M. Study of Organizational Justice in SMEs and Positive Consequences: Systematic Review. *International Journal of Advanced Science and Technology*. 2020;29(3):4717-4730.
- [8] Basso G, Formai S. Il lavoro da remoto in Italia durante la pandemia [Internet]. Banca d'Italia; 2021 Jan [cited 2021 Jun 17] p. 13. Available from: <https://www.bancaditalia.it/media/notizia/il-lavoro-da-remoto-in-italia-durante-la-pandemia>
- [9] Fazio A, Bologna S. Teleworking and Smart Working Theory, Comparison and Praxis. Università degli Studi di Palermo; 2018.
- [10] AA.VV. Come lo Smart Working sta cambiando il settore bancario. *TICINO WELCOME*. 2021;142-9.
- [11] Vittersø J, Akselsen S, Evjemo B, Julsrud T, Yttri B, Bergvik S. Impacts of Home-Based Telework on Quality of Life for Employees and Their Partners. Quantitative and Qualitative Results From a European Survey. *Journal of Happiness Studies*. 2003;4:201-33.
- [12] Hilbrecht M, Shaw SM, Johnson LC, Andrey J. 'I'm Home for the Kids': Contradictory Implications for Work–Life Balance of Teleworking Mothers. *Gender, Work & Organization*. 2008;15(5):454-76.
- [13] Nakrošienė A, Bučiūnienė I, Goštautaitė B. Working from home: characteristics and outcomes of telework. *IJM*. 2019;40(1):87-101.
- [14] Hartig T, Kylin C, Johansson G. The Telework Tradeoff: Stress Mitigation vs. Constrained Restoration. *Applied Psychology*. 2007;56(2):231-53.
- [15] Mann S, Holdsworth L. The psychological impact of teleworking: stress, emotions and health. *New Technology, Work and Employment*. 2003;18(3):196-211.
- [16] Kossek E, Lautsch B, Eaton S. Telecommuting, Control, and Boundary Management: Correlates of Policy Use and Practice, Job Control, and Work–Family Effectiveness. *Journal of Vocational Behavior*. 2006;68:347-67.
- [17] Fonner KL, Stache LC. All in a day's work, at home: teleworkers' management of micro role transitions and the

- work-home boundary. *New Technology, Work and Employment*. 2012;27(3):242-57.
- [18] Mannocci A, Marchini L, Scognamiglio A, Sinopoli A, De Sio S, Sernia S, et al. Are Bank Employees Stressed? Job Perception and Positivity in the Banking Sector: An Italian Observational Study. *IJERPH*. 2018; 15(4):707.
- [19] Rao JV, Chandraiah K. Occupational stress, mental health and coping among information technology professionals. *Indian J Occup Environ Med*. 2012;16(1):22-6.
- [20] Kumar SG, Dharanipriya A. Prevalence and pattern of occupational injuries at workplace among welders in coastal south India. *Indian J Occup Environ Med*. 2014;18(3): 135-9.
- [21] Elm E von, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP, et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement: Guidelines for Reporting Observational Studies. *PLOS Medicine*. 2007;4(10):e296.
- [22] Chiappetta M, Mazzalai E, Sernia S, La Torre G. Working in 'smart' mode during the Covid-19 pandemic. Validation of a questionnaire in the healthcare sector. *Clin Ter*. 2021;172(3):211-4.
- [23] Lemeshow S, Hosmer DW. A review of goodness of fit statistics for use in the development of logistic regression models. *Am J Epidemiol*. 1982;115(1):92-106.
- [24] Awada M, Lucas G, Becerik-Gerber B, Roll S. Working from home during the COVID-19 pandemic: Impact on office worker productivity and work experience. *Work*. 2021;69(4):1171-89.
- [25] Weitzer J, Papantoniou K, Seidel S, Klösch G, Caniglia G, Laubichler M, et al. Working from home, quality of life, and perceived productivity during the first 50-day COVID-19 mitigation measures in Austria: a cross-sectional study. *Int Arch Occup Environ Health* [Internet]. 2021 Apr 20; Available from: <https://doi.org/10.1007/s00420-021-01692-0>
- [26] Hallman DM, Januario LB, Mathiassen SE, Heiden M, Svensson S, Bergström G. Working from home during the COVID-19 outbreak in Sweden: effects on 24-h time-use in office workers. *BMC Public Health*. 2021;21(1):528.
- [27] Moretti A, Menna F, Aulicino M, Paoletta M, Liguori S, Iolascon G. Characterization of Home Working Population during COVID-19 Emergency: A Cross-Sectional Analysis. *International Journal of Environmental Research and Public Health*. 2020;17(17):6284.
- [28] Maruyama T, Hopkinson PG, James PW. A multivariate analysis of work-life balance outcomes from a large-scale telework programme. *New Technology, Work and Employment*. 2009;24(1):76-88.
- [29] Kelliher C, Anderson D. Doing more with less? Flexible working practices and the intensification of work. *Human Relations*. 2010;63(1):83-106.
- [30] Di Tecco C, Ronchetti M, Russo S, Ghelli M, Rondinone BM, Persechino B, et al. Implementing Smart Working in Public Administration: a follow up study. *Med Lav*. 2021;112(2):141-52.
- [31] Golden TD. The role of relationships in understanding telecommuter satisfaction. *Journal of Organizational Behavior*. 2006;27(3):319-40.
- [32] Sarti D, Torre T. Is Smart Working a Win-Win Solution? First Evidence from the Field. *Well-being at and through Work*. 2017;9:231.
- [33] Şentürk E, Sağaltıcı E, Geniş B, Günday Toker Ö. Predictors of depression, anxiety and stress among remote workers during the COVID-19 pandemic. *Work*. 2021;70(1):41-51.
- [34] Albano R, Parisi T, Tirabeni L. Gli smart workers tra solitudine e collaborazione. 1 [Internet]. 2019 Nov 4 [cited 2021 Jun 17];9(17). Available from: <https://oaj.fupress.net/index.php/cambio/article/view/7395>
- [35] Golden TD, Veiga JF, Dino RN. The impact of professional isolation on teleworker job performance and turnover intentions: Does time spent teleworking, interacting face-to-face, or having access to communication-enhancing technology matter? *Journal of Applied Psychology*. 2008;93(6): 1412-21.
- [36] Pérez Pérez M, Martínez Sánchez A, Pilar de Luis Carnicer M, José Vela Jiménez M. Knowledge tasks and teleworking: a taxonomy model of feasibility adoption. *Journal of Knowledge Management*. 2002;6(3):272-84.
- [37] Morganson VJ, Major DA, Oborn KL, Verive JM, Heelan MP. Comparing telework locations and traditional work arrangements: Differences in work-life balance support, job satisfaction, and inclusion. *Journal of Managerial Psychology*. 2010;25(6):578-95.
- [38] Cooper CD, Kurland NB. Telecommuting, professional isolation, and employee development in public and private organizations. *Journal of Organizational Behavior*. 2002;23(SPEC. ISS.):511-32.
- [39] Neri M, Bonato R, Zappalà S, Torre T, Scapolan A, Mizzau L, et al. Smart working: una prospettiva critica [Internet]. 2017. Available from: <http://amsacta.unibo.it/5717/>
- [40] Afonso P, Fonseca M, Teodoro T. Evaluation of anxiety, depression and sleep quality in full-time teleworkers. *Journal of Public Health* [Internet]. 2021 May 25 [cited 2021 Jun 17];(fdab164). Available from: <https://doi.org/10.1093/pubmed/fdab164>
- [41] Chiappetta M. The Technostress: definition, symptoms and risk prevention. 2017;11:4.
- [42] Fukushima N, Machida M, Kikuchi H, Amagasa S, Hayashi T, Odagiri Y, et al. Associations of working from home with occupational physical activity and sedentary behavior under the COVID-19 pandemic. *J Occup Health* [Internet]. 2021;63(1). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7938758/>
- [43] Celis-Morales CA, Lyall DM, Steell L, Gray SR, Iliodromiti S, Anderson J, et al. Associations of discretionary screen time with mortality, cardiovascular disease and cancer are attenuated by strength, fitness and physical activity: findings from the UK Biobank study. *BMC Med*. 2018;16:77.
- [44] Argus M, Pääsuke M. Effects of the COVID-19 lockdown on musculoskeletal pain, physical activity, and work environment in Estonian office workers transitioning to working from home. *Work*. 2021;69(3):741-9.
- [45] Stamatakis E, Gale J, Bauman A, Ekelund U, Hamer M, Ding D. Sitting Time, Physical Activity, and Risk of Mortality in Adults. *Journal of the American College of Cardiology*. 2019;73(16):2062-72.
- [46] Singh H, Singh LP. Musculoskeletal disorders among insurance office employees: A case study. *Work*. 2019;64(1): 153-60.
- [47] Ma CC, Gu JK, Charles LE, Andrew ME, Dong RG, Burchfiel CM. Work-related upper extremity musculoskeletal disorders in the United States: 2006, 2009, and 2014 National Health Interview Survey. *Work*. 2018;60(4): 623-34.
- [48] Shariat A, Cardoso JR, Cleland JA, Danaee M, Ansari NN, Kargarfard M, et al. Prevalence rate of neck, shoulder and lower back pain in association with age, body mass index and gender among Malaysian office workers. *Work*. 2018;60(2):191-9.

- [49] McEwan AM. *Smart Working: Creating the Next Wave*. London: Routledge. 2016;288.
- [50] Selwyn N. The information aged: A qualitative study of older adults' use of information and communications technology. *Journal of Aging Studies*. 2004;18(4): 369-84.
- [51] Arvola R, Tint P, Kristjuhan Ü, Siirak V. Impact of telework on the perceived work environment of older workers. *Scientific Annals of Economics and Business*. 2017;64:199-214.
- [52] Parent-Lamarche A, Boulet M. Employee well-being in the COVID-19 pandemic: The moderating role of teleworking during the first lockdown in the province of Quebec, Canada. *Work*. 2021;70(3):763-75.
- [53] Zappalà S. Smart Working e Fattori Psico-Sociali. In 2017;15-22.
- [54] Lopez-Leon S, Forero DA, Ruiz-Díaz P. Recommendations for working from home during the COVID-19 pandemic (and beyond). *Work*. 2020;66(2):371-5.