

Differential Older Workers' Experience with Technology-related Changes during the COVID-19 Pandemic

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Background

- Workplaces are undergoing **significant digital transformations** that affect how, when and where people work
- Digitalisation and the rise of AI provide **challenges and opportunities**, particularly for older workers, their satisfaction and work participation
- Older workers **are less likely to be equipped** with the relevant capacities to adapt to these changes, compared to other groups
- The intersection of **ageing, working life and digitalisation** is a particularly relevant area of study, as it can illuminate on the conditions for more inclusive working life

Background

- The COVID-19 pandemic reshaped profoundly the work environments. One major shift was a **rapid increase in the adoption of digital technologies at work**
- Technology-related changes involved an increased use of digital tools for **communication, administration, and collaboration**. New work arrangements such as **hybrid or remote** working, and new modes of **training** and new routines emerged
- While some of these shifts were already underway in certain workplaces and among certain groups, **the pandemic accelerated their adoption**, often finding workers with little or no preparation

Differential impacts of tech-related changes

- While the use of digital technologies at work is associated with a range of positive outcomes, **not all workers are equally equipped** to benefit from these opportunities
- This disparity arises from **inequalities** in digital access, use, competence, trust and support, particularly affecting older workers
- **Digital inequalities** are typically shaped by factors such as age, gender, education, occupation, job level
- It is likely that different groups of older workers experienced technology-related changes at work **in diverse ways during the pandemic**, depending on their unique circumstances

Aim and research questions

We aimed at understanding older workers' evaluation of the experience with technology-related changes at work during the COVID-19 pandemic and its association with socioeconomic and contextual factors in Sweden.

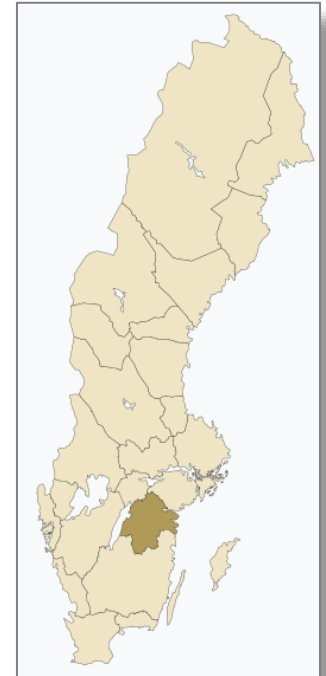
Two guiding research questions:

RQ1: What changes in the use of digital technology at work did older workers experience during the COVID-19 pandemic?

RQ2: How does satisfaction with these changes vary across different groups of older workers?

ASC's COVID-19 study

- The *ASC's COVID-19 study* focused on the social consequences of the COVID-19 pandemic in working life
- The study involved an *online survey* and covered the adult population in the Östergötland region (Sweden)
- Sampling was done through an *online advertisement* in a key local newspaper in the region of Östergötland



ASC's COVID-19 study

- Four waves conducted in June 2020, December 2020, June 2021 and December 2021
- Sampling was unstratified and resulted in a net sample of n=2901
 - Average age: 53 years
 - Women: 65%, Men 35%
 - 69% have more than upper-secondary education

Data and methods

- For the present paper, we pooled data from 3 waves and used a cross-sectional design.
- Sample for this study
 - Individuals 50+ who indicated to be (self-)employed at the time of the survey and reported having experienced technology-related changes during pandemic time
 - N= 291
 - Women=62%, Man=38%
 - Average age: 56
 - 50-59 ys =80%; 60 ys and over=20%
 - Educational level. Low/medium=44%, high=56%
 - Managing responsibilities. YES=30%, NO=70%

Analytical approach

1. Description of the **experienced technology-related changes** at work during the pandemic
2. Comparisons between those who were satisfied with technology-related changes at work and those who were not
3. Modelling of the **association between satisfaction and relevant predictors**

Results – Types of experienced changes

Types of technology-related change*	Frequencies (%)
Having more online meetings	272 (96)
Writing more emails	150 (53)
Using new programs on the computer or phone	133 (47)
Using technology to perform more tasks	125 (44)
Using more programs on the computer or phone	117 (41)
Participating in online training	49 (17)
Using social media for work purposes more often	37 (13)
Using new devices (except for programs on the computer or phone)	32 (11)
Moving or extending business online	6 (2)

*N = 282. Respondents could select more than one answer.

- **Most common change.** Increase in online meetings—reported by 96% (272 individuals)
- **Other significant changes:**
 - Writing more emails (53%, 150 individuals)
 - Using new programs on computers or phones (47%, 133 individuals)
 - Performing more tasks with digital technologies (44%, 125 individuals)
- **Least reported changes.** A small percentage of workers used social media for work purposes more often or adopted new types of devices or moved their business online

Results – (Dis)satisfaction with the changes

Satisfaction with changes in technology use at work during COVID-19 pandemic (YES/NO)*	OR	SE	p	[95% CI]
Intercept	0.50	0.21	0.094	0.22, 1.12
<i>Age</i>				
60+ (ref.)	1	–	–	–
50–59	2.65	0.86	0.003**	1.41, 5.00
<i>Education</i>				
Low/Medium (ref.)	1	–	–	–
High	1.87	0.53	0.026*	1.08, 3.24
<i>Gender</i>				
Women	1	–	–	–
Men	0.72	0.20	0.239	0.41, 1.25
<i>Management responsibilities</i>				
Without management resp. (ref.)	1	–	–	–
With management resp.	1.67	0.50	0.088	0.93, 2.99
<i>Concurrent changes in workload experienced during the COVID-19 period</i>				
Yes (ref.)	1	–	–	–
No	2.01	0.56	0.012*	1.16, 3.48
<i>Extent of technology-related difficulties experienced</i>				
None or minor difficulties (ref.)	1	–	–	–
Major difficulties	0.52	0.14	0.017*	0.30, 0.89

*N = 274, Pseudo R² = 0.0650

* p ≤ 0.05, **p ≤ 0.01.

Key predictors of satisfaction with technology-related changes:

- **Age.** Individuals aged 50–59 ys were more likely to report satisfaction compared to those aged 60 ys and over
- **Education level.** Higher educational attainment increased the likelihood of being satisfied
- **Workload changes.** Those who did not experience changes in workload were significantly more likely to be satisfied
- **Technology-related difficulties.** Experiencing difficulties reduced the likelihood of satisfaction

Discussion – Key insights

- Satisfaction with technology-related changes was **unequally distributed** across groups and followed a social gradient
- **Younger, more educated, and digitally competent** older workers were more likely to report satisfaction
- Their counterparts were more likely to experience technology-related changes at work in a **negative manner and to suffer from its consequences** in the work and private sphere
- It is likely that these groups did not have the appropriate access to job resources, training, and digital resources to be able to deal with technology-related changes at work smoothly during the pandemic

Discussion – Practical implications and future research

Practical implications:

- **Digital resilience strategies.** Urgent need to prepare older workers for ongoing and future unexpected accelerations in digital transformation (e.g. pandemic-driven changes).
- **Focused training interventions.** Tailored efforts to ensure more equal access to digital training and upskilling, particularly for less educated and less digitally skilled workers.

Future research directions:

- Exploring the *consequences of (dis)satisfaction* with technology-related changes in late phases of working life
- Investigating *how satisfaction with digital-related changes influences outcomes* such as job satisfaction, willingness and ability to prolong working life, and wellbeing
- Examining how a positive experience with technology-related changes at work can be supported among older workers

Thank you for your attention

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