

Changes in burnout during COVID-19 in a Finnish five-wave population sample

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Research questions

- 1) Did burnout levels change across different phases, before and during the COVID-19 outbreak in the Finnish population?
- 2) Did the changes differ depending on age, gender, education, living alone, and teleworking status?

Builds on a study: Kaltainen, J., & Hakanen, J. (2022). Changes in occupational well-being during COVID-19: the impact of age, gender, education, living alone, and telework in a Finnish four-wave population sample. *Scandinavian Journal of Work, Environment & Health*. doi:10.5271/sjweh.4033



1st COVID-19 wave :

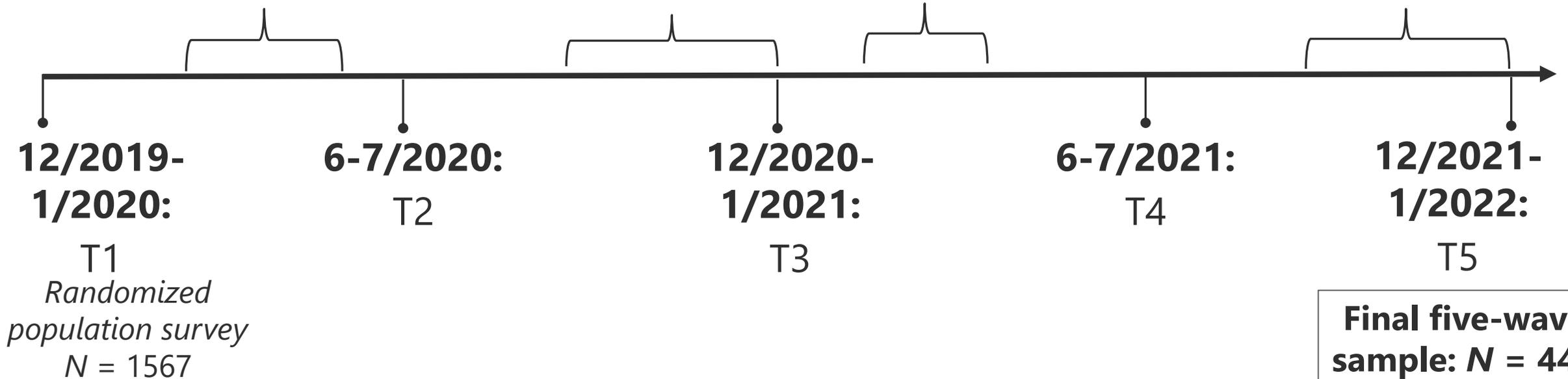
- Emergency powers legislation
- Max. ten people gatherings
- School closures, restricted access to daycare, teleworking from home

6/2021 →
Vaccine rollout for working age population

2nd COVID-19 wave

3rd COVID-19 wave

4th COVID-19 wave



12/2019-1/2020:
T1
Randomized population survey
N = 1567

6-7/2020:
T2

12/2020-1/2021:
T3

6-7/2021:
T4

12/2021-1/2022:
T5

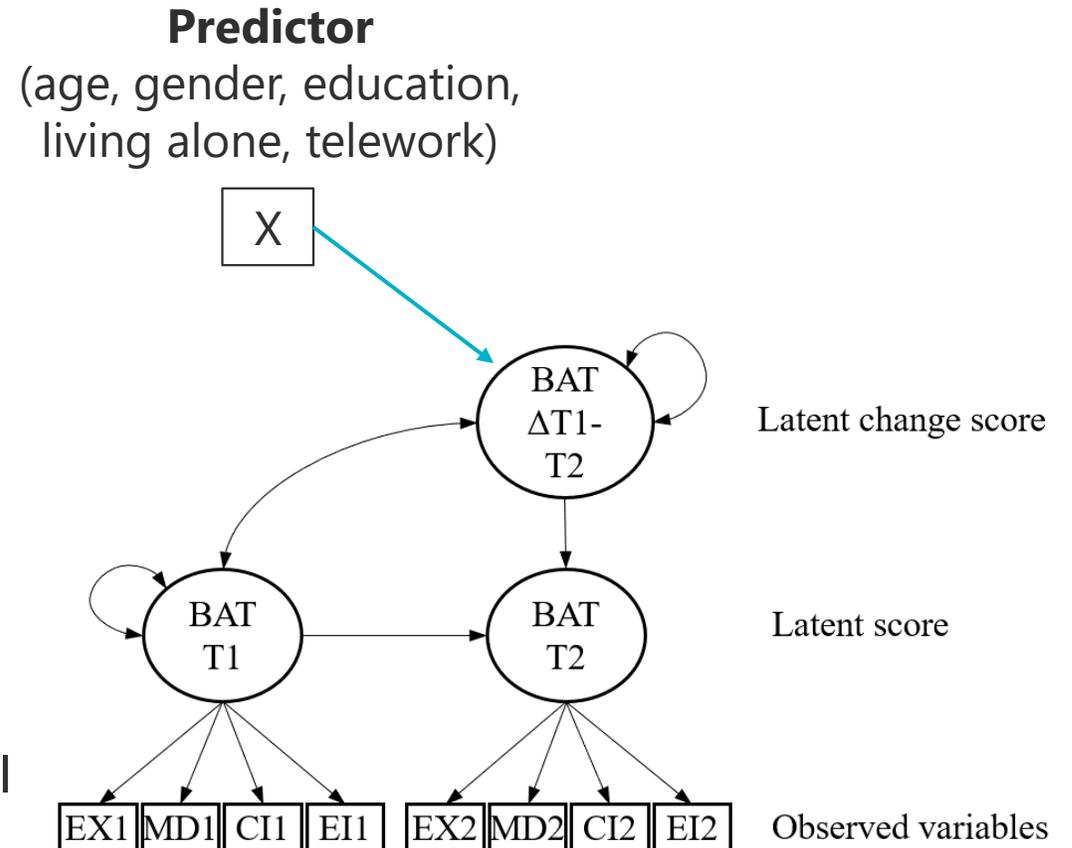
Final five-wave sample: N = 446

Description of the sample and the five predictor variables

	Five-wave sample <i>N</i> =446	Group sizes
Age	<i>M</i> = 49.5 (<i>SD</i> = 9.9)	
Gender: males / females	41.5 / 58.5 %	<i>n</i> = 185 / 261
Education: low / intermediate / high education	29.6 / 40.4 / 30 %	<i>n</i> = 132 / 180 / 134
Living alone: no / yes (at T3-T5)	72.1 / 27.9 %	<i>n</i> = 295 / 114
Teleworking: not at all / at least 75 % of working hours (T2-T5)	62.6 / 37.4 %	<i>n</i> = 191 / 114
Weekly working hours	<i>M</i> = 37.7 (<i>SD</i> = 6.2)	
Supervisor or manager: no / yes	85.4 / 14.6 %	
Type of contract: permanent / temporary	92.6 / 7.4 %	
Employment sector: public / private / other	41.7 / 52.2 % / 6.1 %	

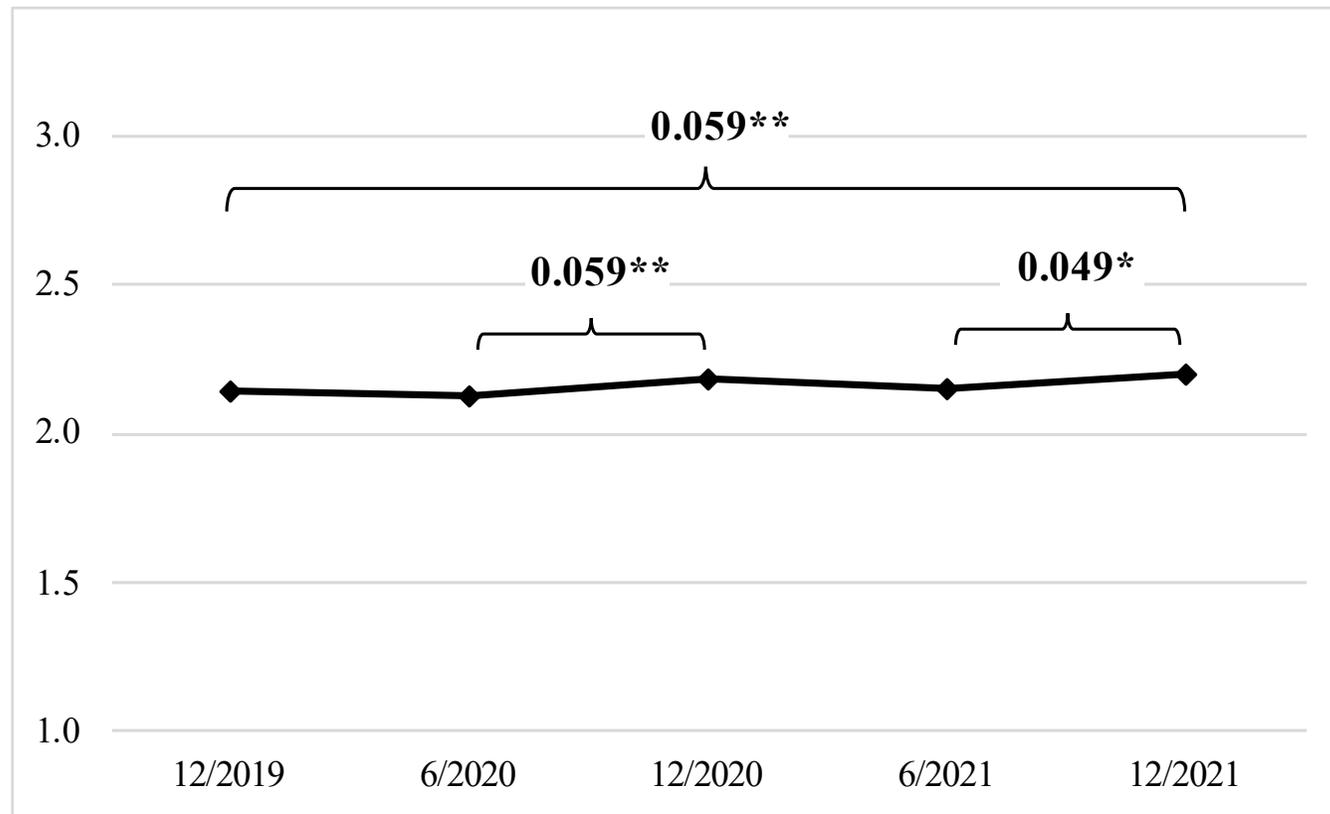
Analyses

- Outcome variable: BAT-23
- Latent change score modeling with several indicators to analyze changes across specific time spans (e.g., Henk & Castro-Schilo; 2016).
 - Within-person changes and whether other variables predict between-person variability in such changes.
 - Strict measurement invariance over time (equal loadings and item intercepts and residuals).
 - Data was weighted by age, gender, and residential area to match population distribution.



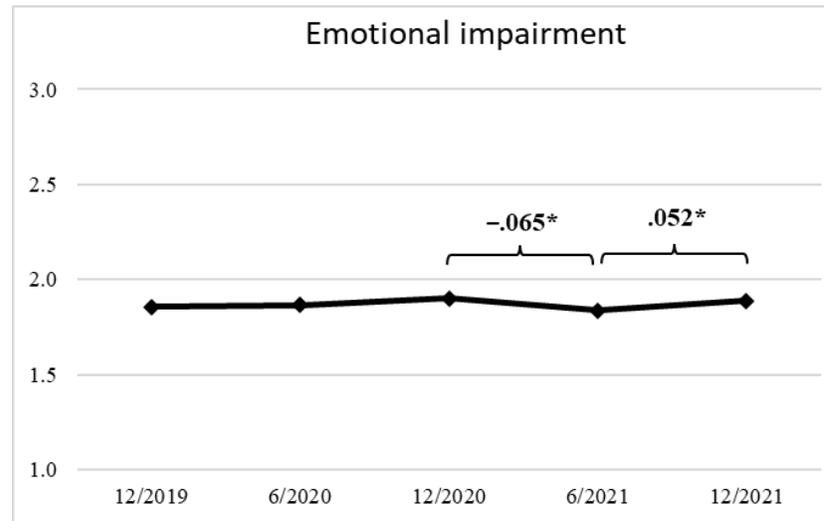
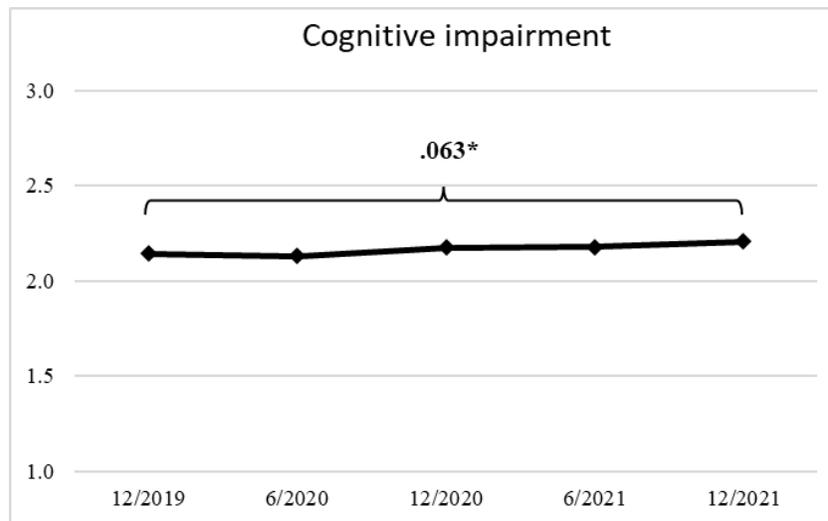
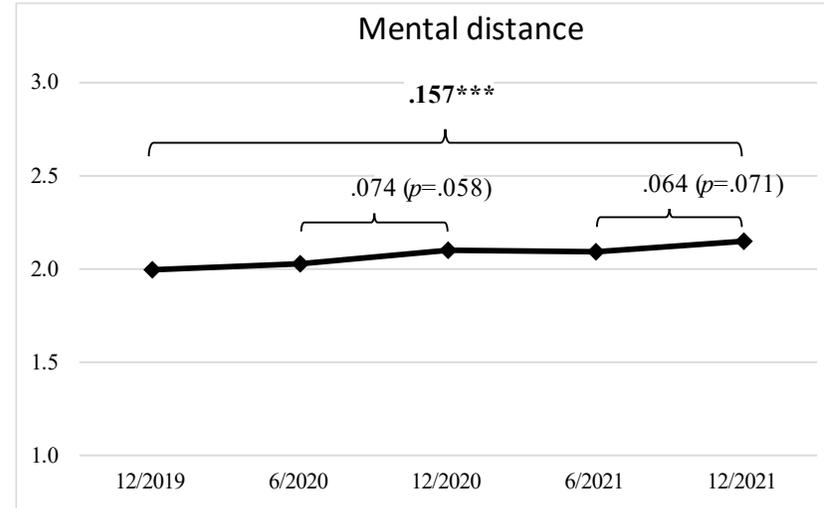
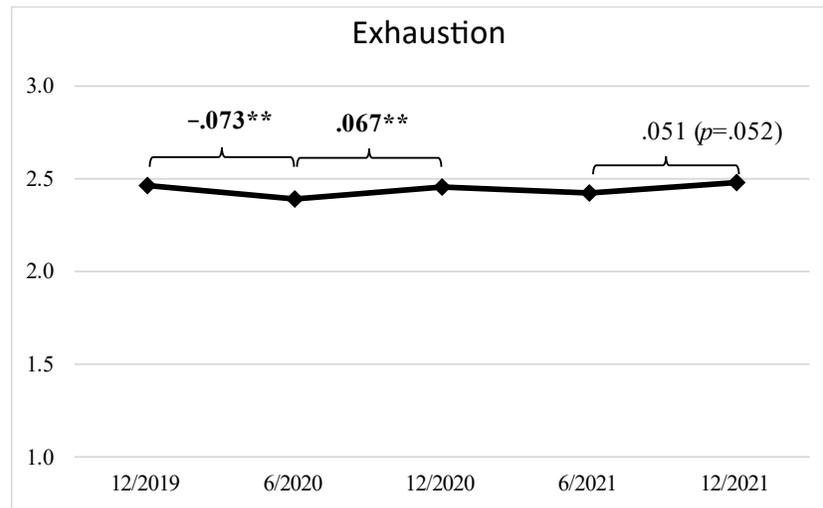
Results

Slight increases in burnout in Fall 2020 and Fall 2021

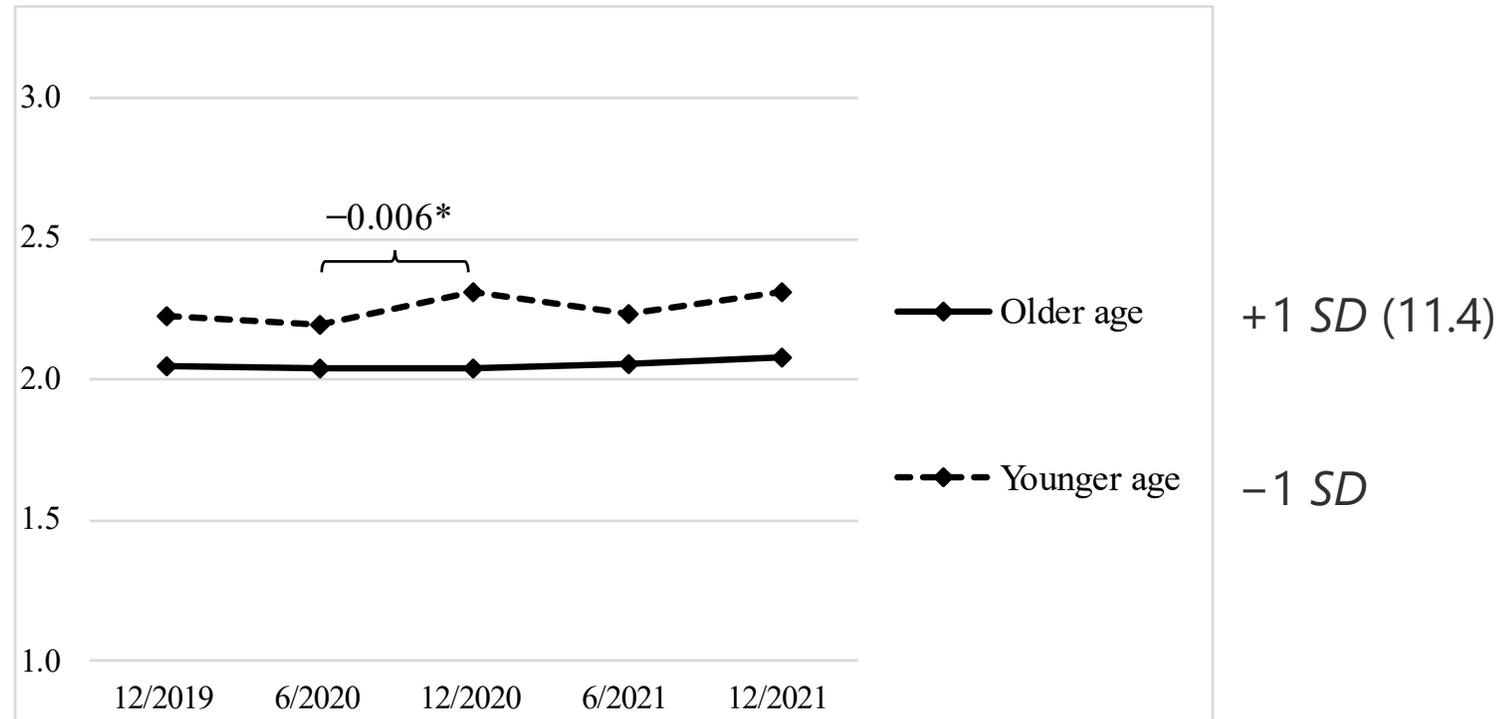


Full sample (N=446)

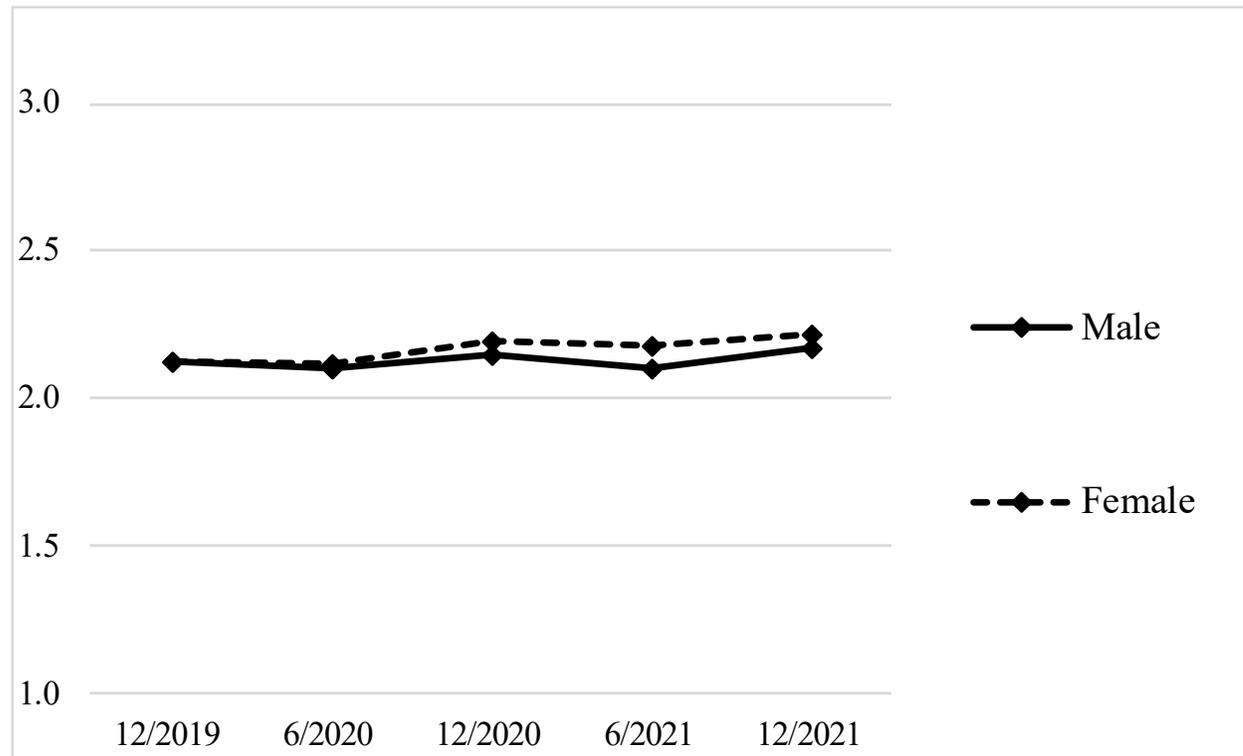
Changes in the core symptoms



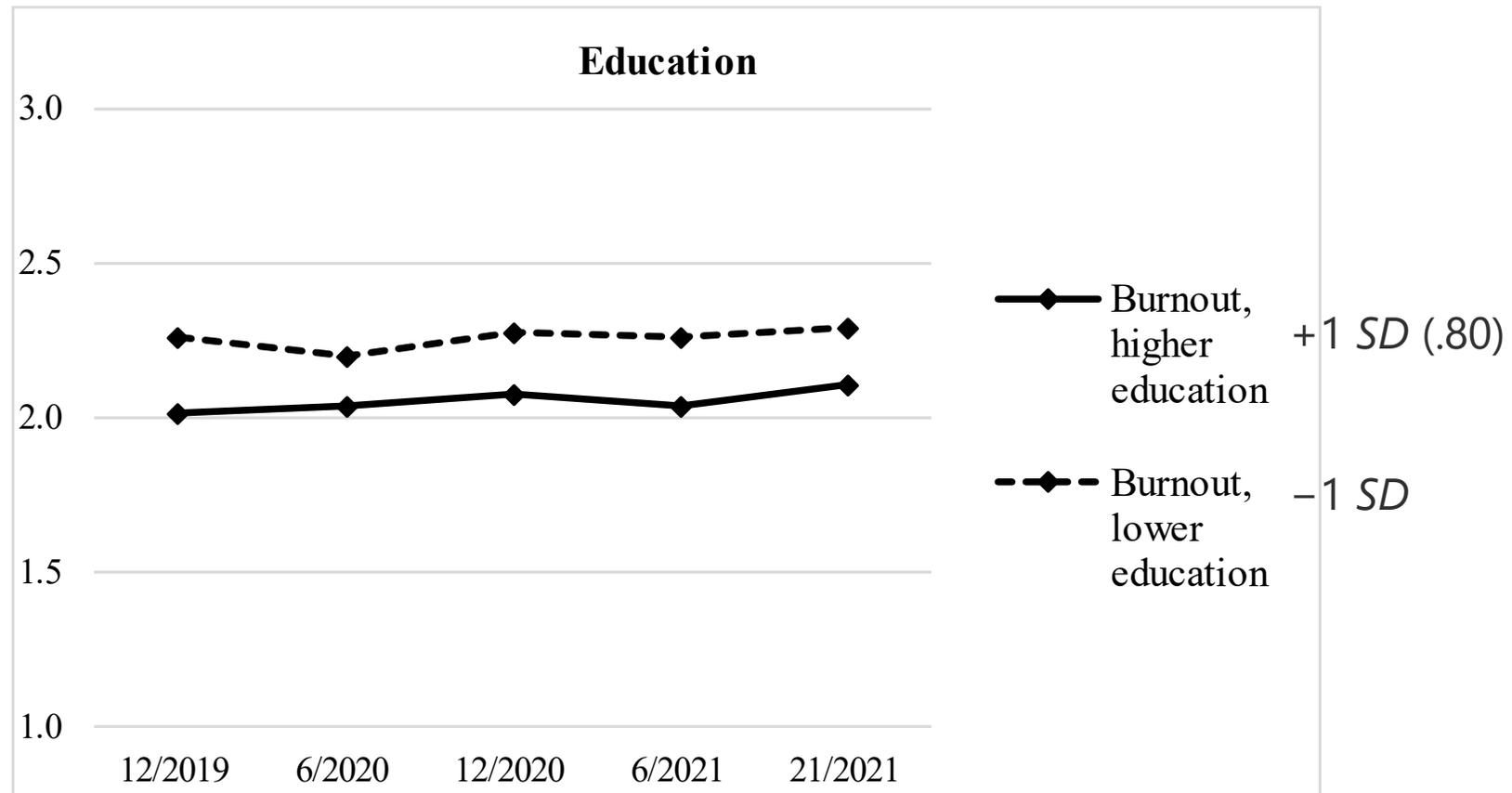
The younger one was, the more burnout increased in Fall 2020



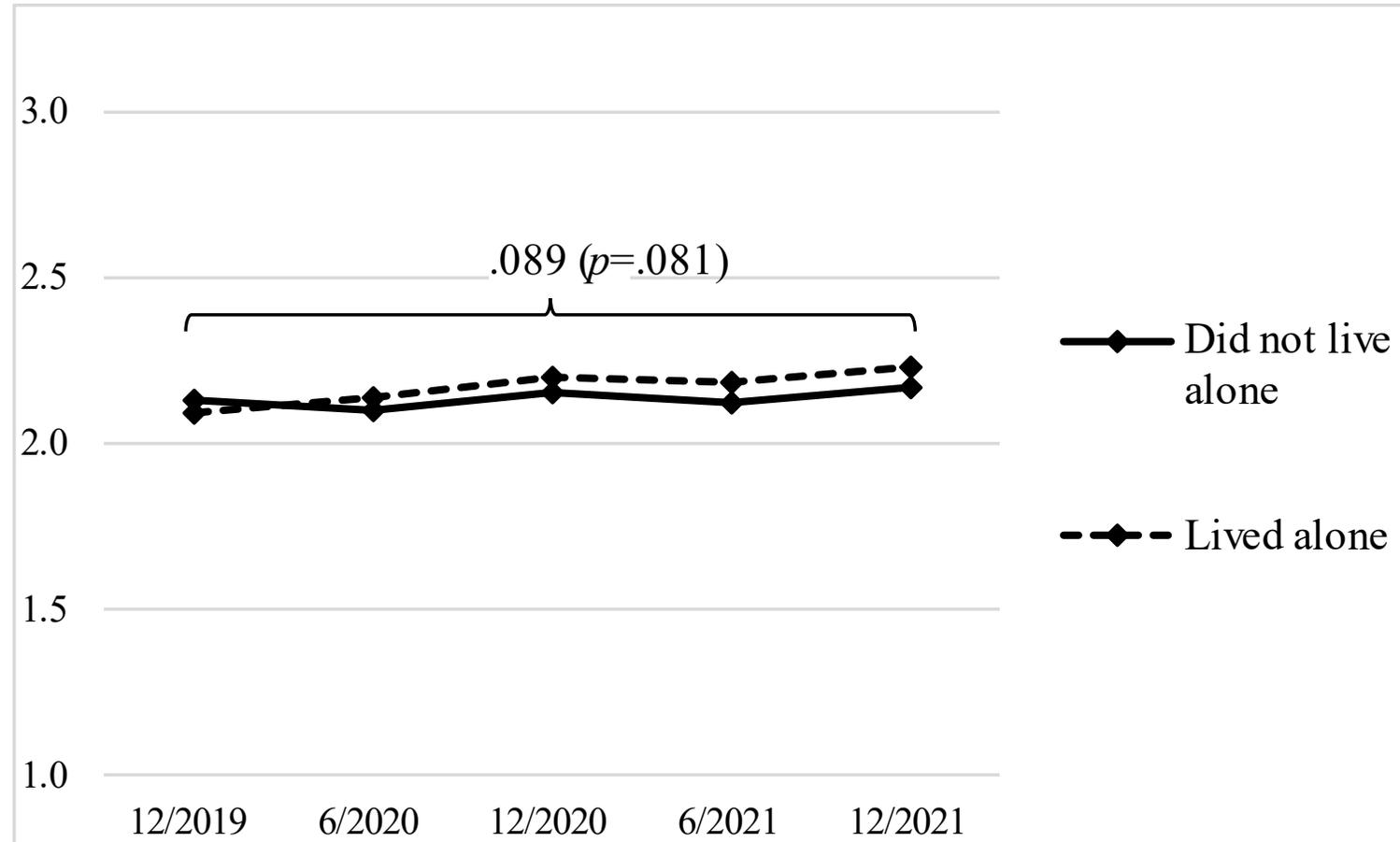
Burnout evolved similarly for males and females



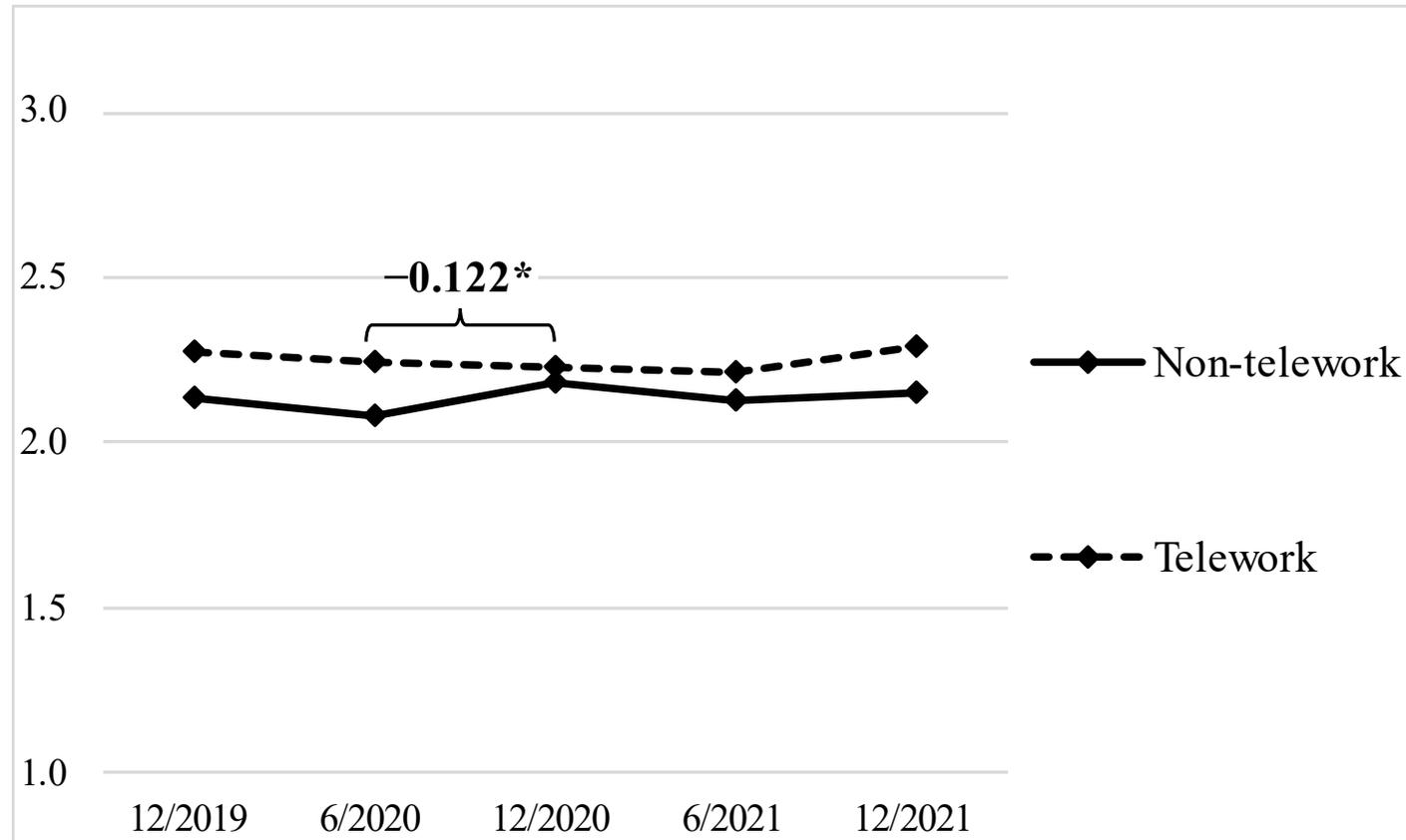
No differences in burnout changes depending on education level



Burnout (tentatively) increased slightly more for those who lived alone



In Fall 2020 burnout increased more for non-teleworkers



Discussion

About the findings in the full sample 1/2

- Apparently, COVID-19 outbreak did not have a substantial impact on burnout mean-levels.
 - Perhaps there were changes for many participants but opposite in direction?
 - By 6/2021 (T4), burnout decreased for 14 % and increased for 18 % statistically significantly since 12/2019 (reliable change index; Christensen & Mendoza, 1986)
 - Could substantial increase in teleworking during Spring (56 % of employees in Finland, highest number in Europe; Eurofound, 2020) have protected against burnout?
 - Yet, burnout appears to have increased amongst full-time teleworkers by Summer 2022 (T6).
- COVID-19 related causes for burnout increases?
 - 2nd wave in Fall 2020: *Even that there were also some positive sides in Spring 2020, I would now like COVID-19 to be gone but it isn't.. ?*
 - 4th wave in Fall 2021: *Even the vaccines did not make it go away.*

About the findings in the full sample 2/2

- Mental distance and cognitive impairment increased since pre-COVID-19, other symptoms did not.
 - Increases in mental distance and exhaustion occurred across the same time spans (Fall 2020 and Fall 2021), yet only exhaustion decreased in Spring 2020.
 - Any implications for the notion that mental distance follows from other symptoms?
- Decrease in exhaustion in Spring 2020: "Holiday"-effect?
 - Strain at work- and non-work domains decreased for substantial portion of population (everything is closed, teleworking etc.)?
 - Also work engagement increased in Spring 2020.

The young and non-teleworkers were (somewhat) more at risk?

- Some indication regarding young age and higher burnout.
 - Burnout increased more the younger one was in Fall 2020, but only then.
 - Age was also associated with lower burnout at 12/2020, but not at other time points.
- Non-teleworkers experienced increase in burnout in Fall 2020, which also was stronger than amongst teleworkers
 - Tentatively, non-teleworkers experienced decrease in burnout in Spring 2020 ($-.05$, $p = .063$), similar to the full sample
- Taken together: changes in occupational well-being are more likely explained by changes in the working conditions and subjective experiences rather than by differences in demographics or work arrangements.

Limitations

- Altogether 11 out of 50 examined parameters were statistically significant at $p < .05$
 - The more tests, the higher the likelihood of chance findings.
- Sample size is down to $N = 446$
 - Attrition analyses (at T4) did not indicate substantial bias.
- We did not examine working conditions.



References

- Christensen, L. & J. L. Mendoza (1986). A method of assessing change in a single subject: an alteration of the RC index. *Behavior Therapy* 17: 305-308.
- Eurofound. (2020). *Living, working and COVID-19 dataset*. Retrieved from: <http://eurofound.link/covid19data>
- Henk, C. M., & Castro-Schilo, L. (2016). Preliminary detection of relations among dynamic processes with two-occasion data. *Structural Equation Modeling: A Multidisciplinary Journal*, 23(2), 180-193. doi:10.1080/10705511.2015.1030022
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