

# The COVID-19 Social Monitor – Monitoring the Social and Public Health Impact of the Pandemic



André Moser<sup>1</sup>, Maria Carlander<sup>2</sup>, Simon Wieser<sup>2</sup>, Oliver Hämmig<sup>1</sup>, Sarah Heiniger<sup>2</sup>, Milo A. Puhan<sup>1</sup>, Viktor von Wyl<sup>1</sup>, Marc Höglunger<sup>2</sup>

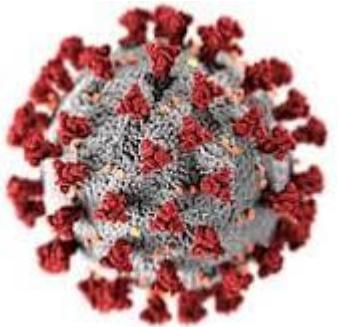
<sup>1</sup> Epidemiology, Biostatistics and Prevention Institute, University of Zurich

<sup>2</sup> Winterthur Institute of Health Economics, Zurich University of Applied Sciences

Mitarbeit: Anja Collenberg, Stephanie Dosch, Klaus Eichler, Flurina Meier

Dr. Marc Höglunger, ETH Risk Center Seminar Series, September 22, 2020

# COVID-19 Social Monitor: Objectives



- Timely monitoring of the broader impact of the Covid19 pandemic on relevant social and public health domains
  - to inform the public and health authorities
  - to allow for analyses of changes in outcomes, individual trajectories, group differences, impact of public health measures, etc.
- Focus on
  - individual well-being and quality of life
  - psychological stress
  - social and physical activities
  - health and health services use
  - work
- Goal (in April 2020): Keep surveying until the end of the pandemic...

# COVID-19 Social Monitor: Methods

- Repeated (online) survey of a randomly selected cohort from an existing online panel population (LINK panel)
- Stratified sample, covering all of Switzerland
- Questionnaire in German, Italian, French

The screenshot shows a survey page from the COVID-19 Social Monitor. In the top right corner, there is a logo for Universität Zürich (UZH) and zhaw, with a language selection dropdown set to "Deutsch". The main heading is "Ein paar Fragen zu Ihrem Wohlbefinden und Ihrer Gesundheit:". Below it, a question asks: "Wie schätzen Sie Ihre Lebensqualität im Allgemeinen im Moment ein?". Five radio button options are listed vertically: "Sehr gut", "Gut", "Weder gut noch schlecht", "Schlecht", and "Sehr schlecht". At the bottom right of the page is a blue ">>" button.

Deutsch

Ein paar Fragen zu Ihrem Wohlbefinden und Ihrer Gesundheit:

Wie schätzen Sie Ihre Lebensqualität im Allgemeinen im Moment ein?

Sehr gut

Gut

Weder gut noch schlecht

Schlecht

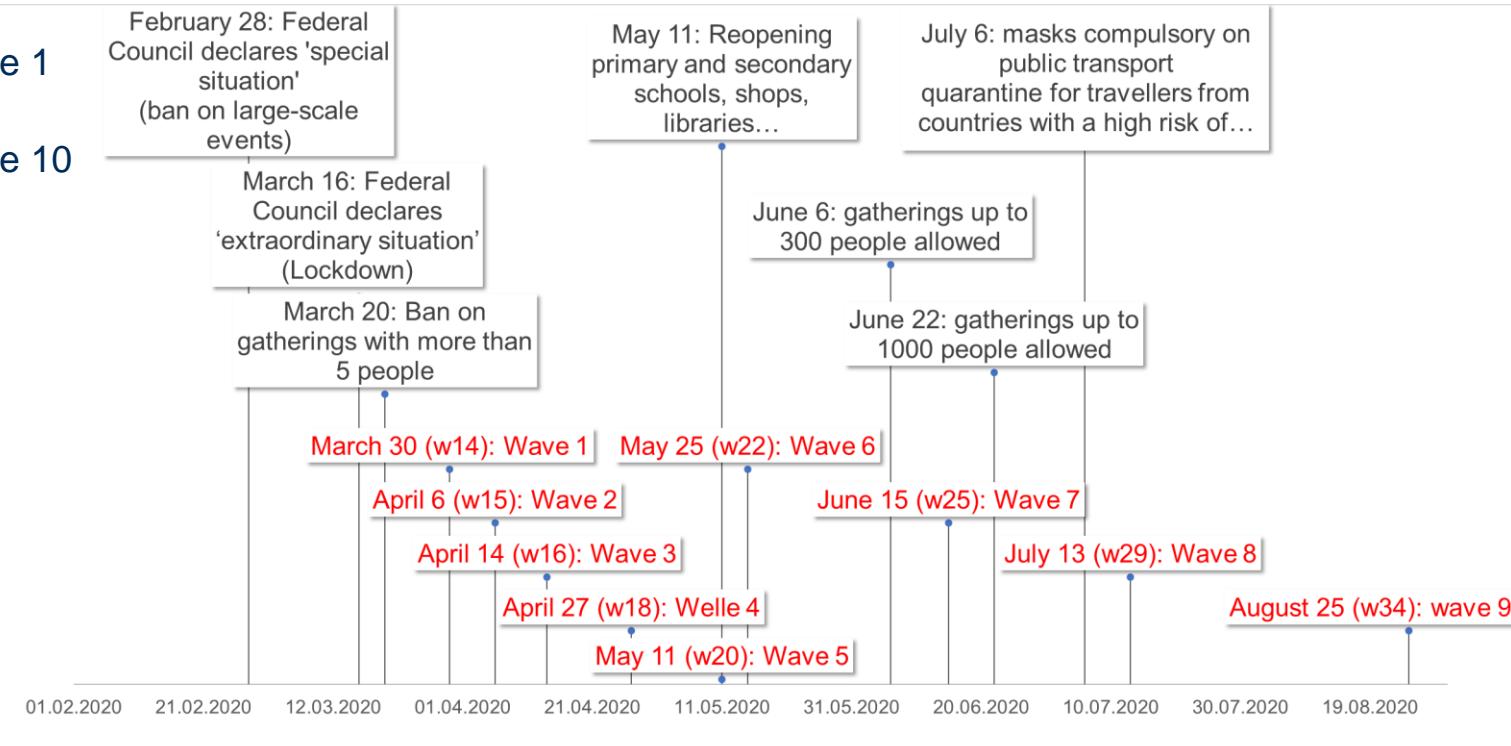
Sehr schlecht

>>

# COVID-19 Social Monitor: Methods

- During lockdown weekly, later bi-weekly, now monthly invitation of respondents.

- March 30:  
start survey wave 1
- September 21:  
start survey wave 10



# COVID-19 Social Monitor: Methods

- Sampling and calibration weights to allow for “representative” analysis of the Swiss population regarding age, gender, language region, canton, and education.
- 8,174 contacted individuals and N=2,026 responses in the first survey wave (response rate: 24.8%). 1500 to 1700 responses in the follow-up rounds.
- Use of established indicators and measures as far as possible.
- Funding so far: own funds from WIG and EBPI, supplemented by contributions of the Federal Office of Public Health and Health Promotion Switzerland
- Following results: mostly fixed-effects (panel) estimates using weighted data

Target journal  
International Journal of Public Health

**Survey Profile: COVID-19 Social Monitor**  
**Timely monitoring of social and public health consequences of the COVID-19 emergency**

André Moser<sup>1</sup>, Maria J. Carlander<sup>2</sup>, Simon Wieser<sup>2</sup>, Oliver Hämmig<sup>1</sup>, Milo A. Puhan<sup>1</sup>, Marc Höglinder<sup>2</sup>

<sup>1</sup> Epidemiology, Biostatistics and Prevention Institute  
University of Zurich  
Hirschengraben 84  
8001 Zurich  
Switzerland

<sup>2</sup> Winterthur Institute of Health Economics  
Zurich University of Applied Sciences  
Gertrudstrasse 15  
8401 Winterthur  
Switzerland

Abstract word count: 180 words (max. 180 words)  
Word count: 2294 words (max. 4000 words)  
Tables: 2  
Figures: 3  
Supplemental Tables: 2  
References: 7

# Results

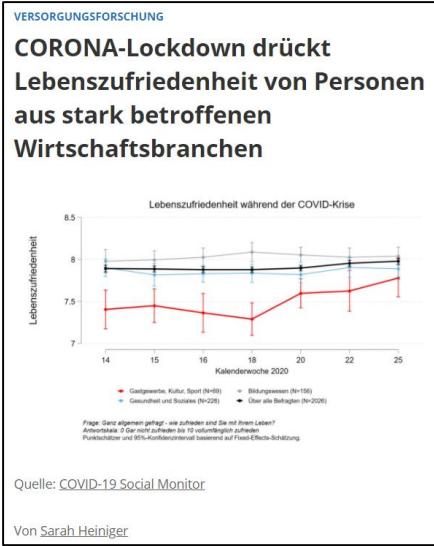
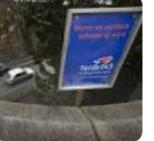
- Publication of new results within one day after finishing data collection:  
<https://www.zhaw.ch/wig/covid-social-monitor>
- Use of diverse communication channels: press releases, Social Media, etc.

 Schweizer Radio und Fernsehen (SRF)

Verzweifelt in der Coronakrise – Vor allem der Jobverlust belastet die Menschen

Der Soziologe Marc Höglinder von der Zürcher Hochschule für angewandte Wissenschaften (ZHAW) untersucht mit seinem ... Es sind momentan 0.064% der Weltbevölkerung positiv auf COVID-19 getestet worden davon

May 23, 2020



**Marc Höglinder**  
Versorgungsforscher und Dozent, ZHAW Winterthurer Institut für Gesundheitsö...  
2 Monate • Bearbeitet • ⓘ

Befunde unseres COVID-19 Social Monitors hübsch animiert - Forschung darf auch schön verpackt sein: <https://lnkd.in/dJrxVj>

Für volle Information die Projektseite: <https://lnkd.in/dVVvtR4>

Herzlichen Dank an alle Beteiligten an ZHAW Zürcher Hochschule für Angewandte Wissenschaften **#wig** und Universität Zürich | University of Zurich und insbesondere auch unseren Unterstützern **Bundesamt für Gesundheit BAG** und **Gesundheitsförderung Schweiz**!  
[#covid19socialmonitor](#)

## Welche Massnahmen treffen Sie, um sich und andere zu schützen?

### Befolgen von Schutzmassnahmen



10 | COVID-19-PANDEMIE

ZÜRCHER ÄRZTEZEITUNG SONDERAUSGABE I NR. 2 I JULI 2020



Ergebnisse aus COVID-19 Social Monitor

Substanzlicher Einbruch bei medizinischen Behandlungen im Lockdown

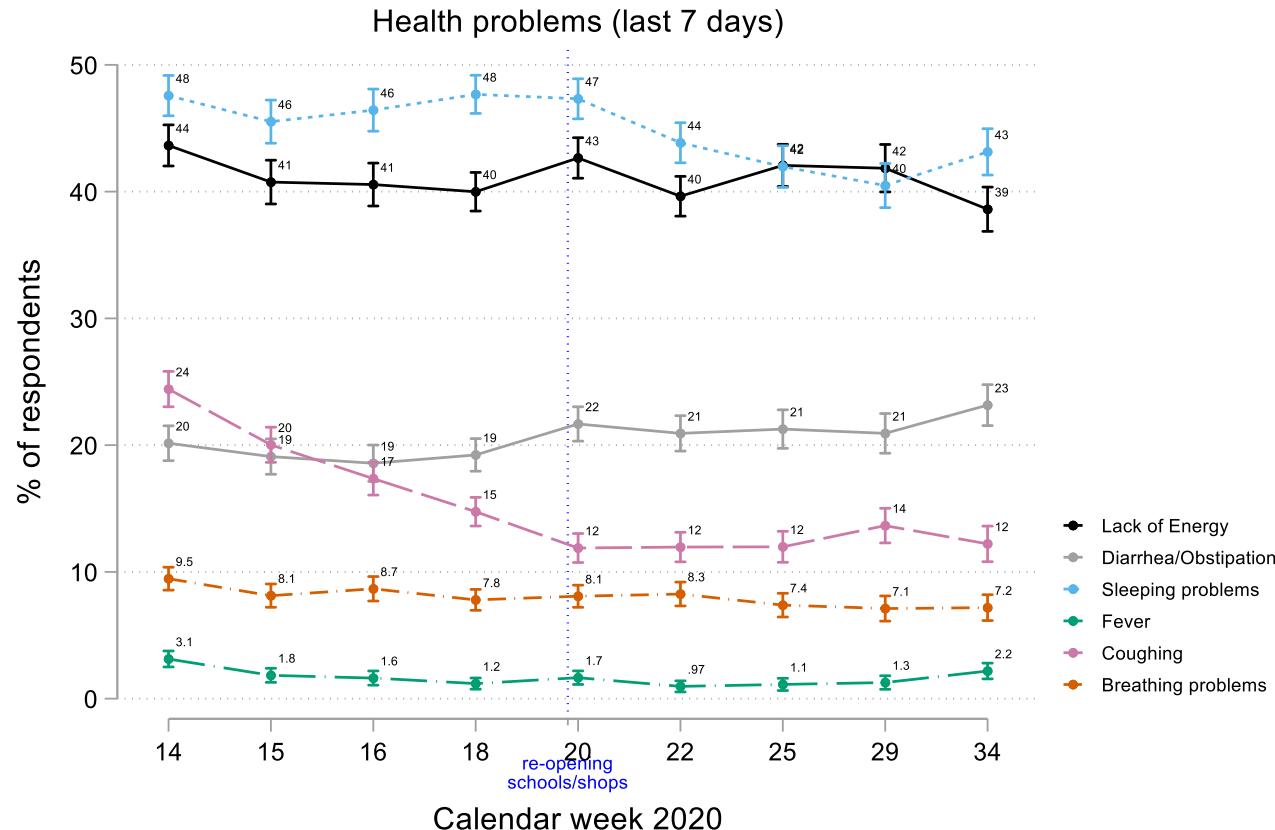
 St.Galler Tagblatt

Wegen Coronavirus: Deutlich weniger Arztbesuche und Spitalbehandlungen | St.Galler Tagblatt

Die Absagen kamen laut dem sogenannten Covid-19-Social-Monitor ... hat uns etwas erstaunt», wird ZHAW-Forscher Marc Höglinder in der ...  
Apr 17, 2020

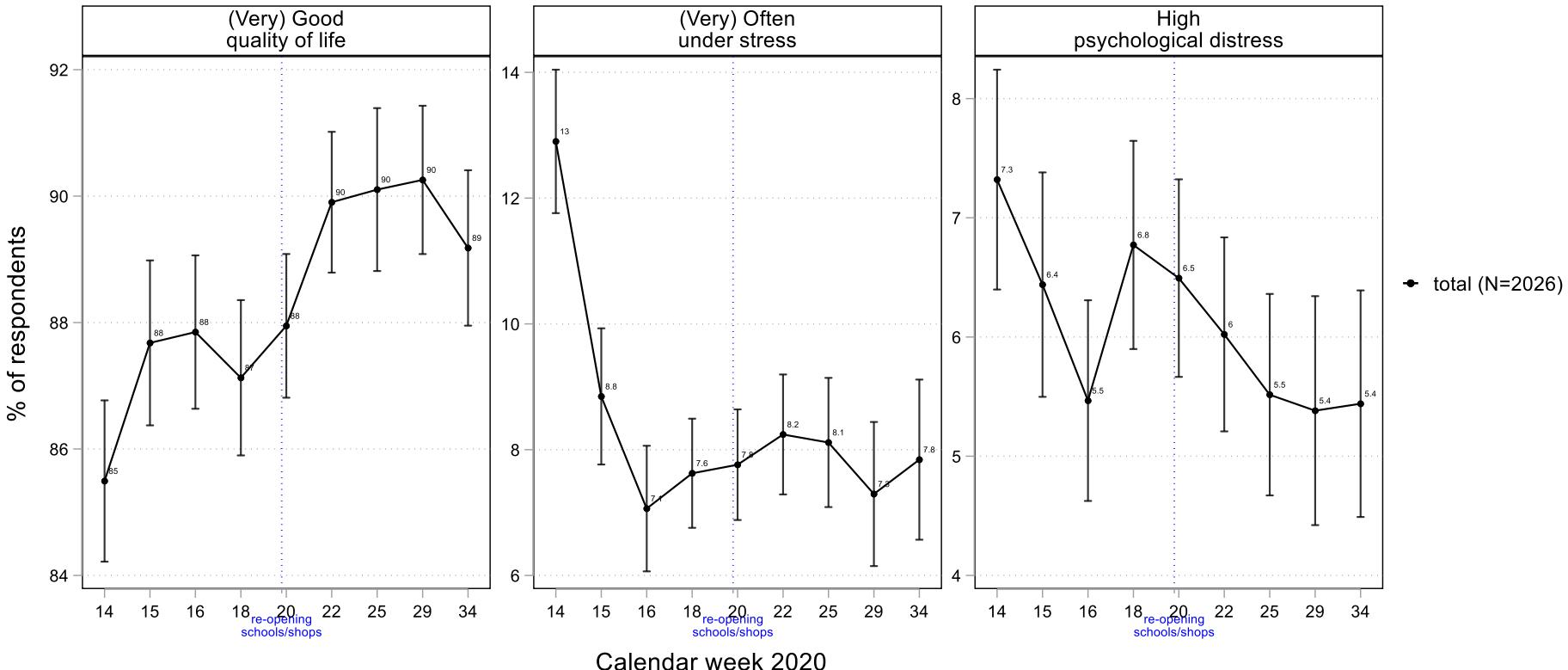
# Results: Health state of the general population

Less coughing in summer, but otherwise no changes in public health...



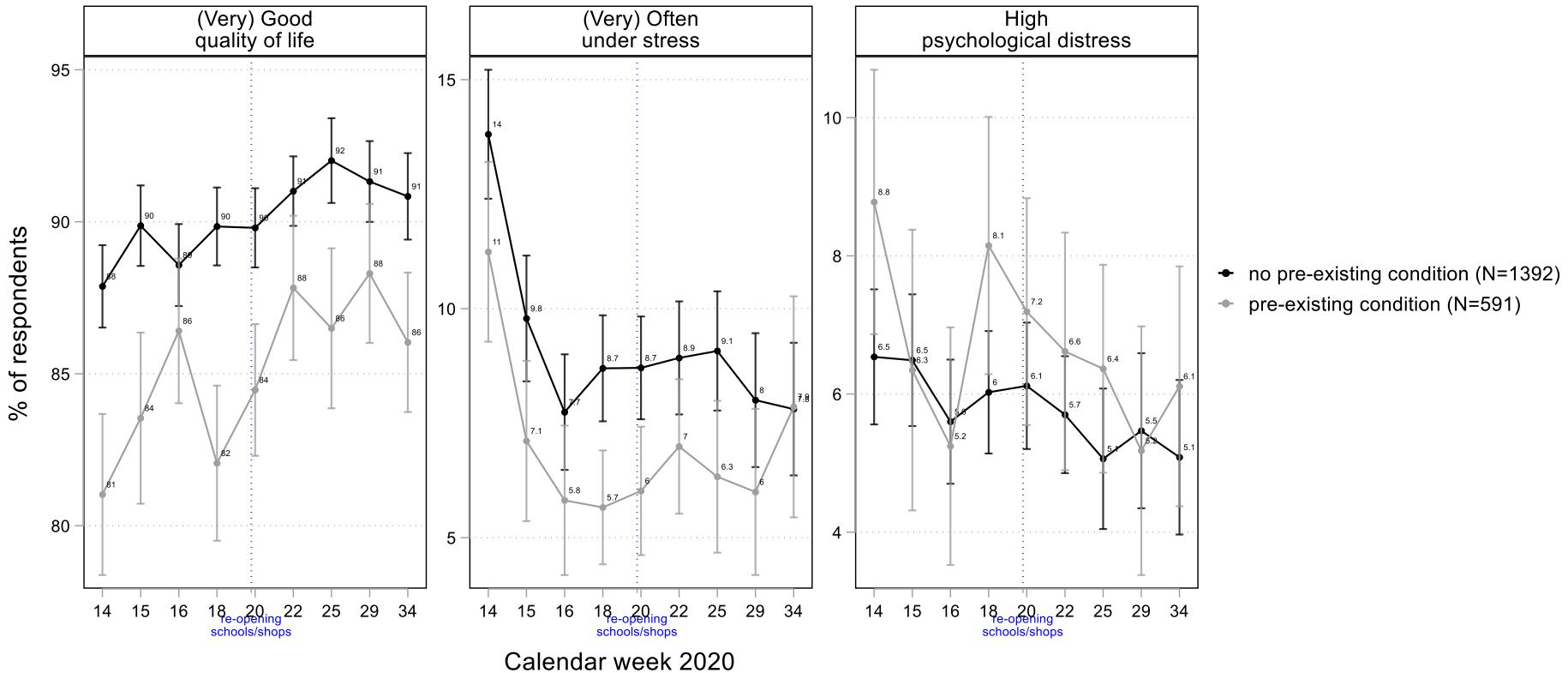
# Results: Quality of life, stress, and psychological burden

On average, impaired quality of life and more stress during early lockdown. For few, increased psychological distress.



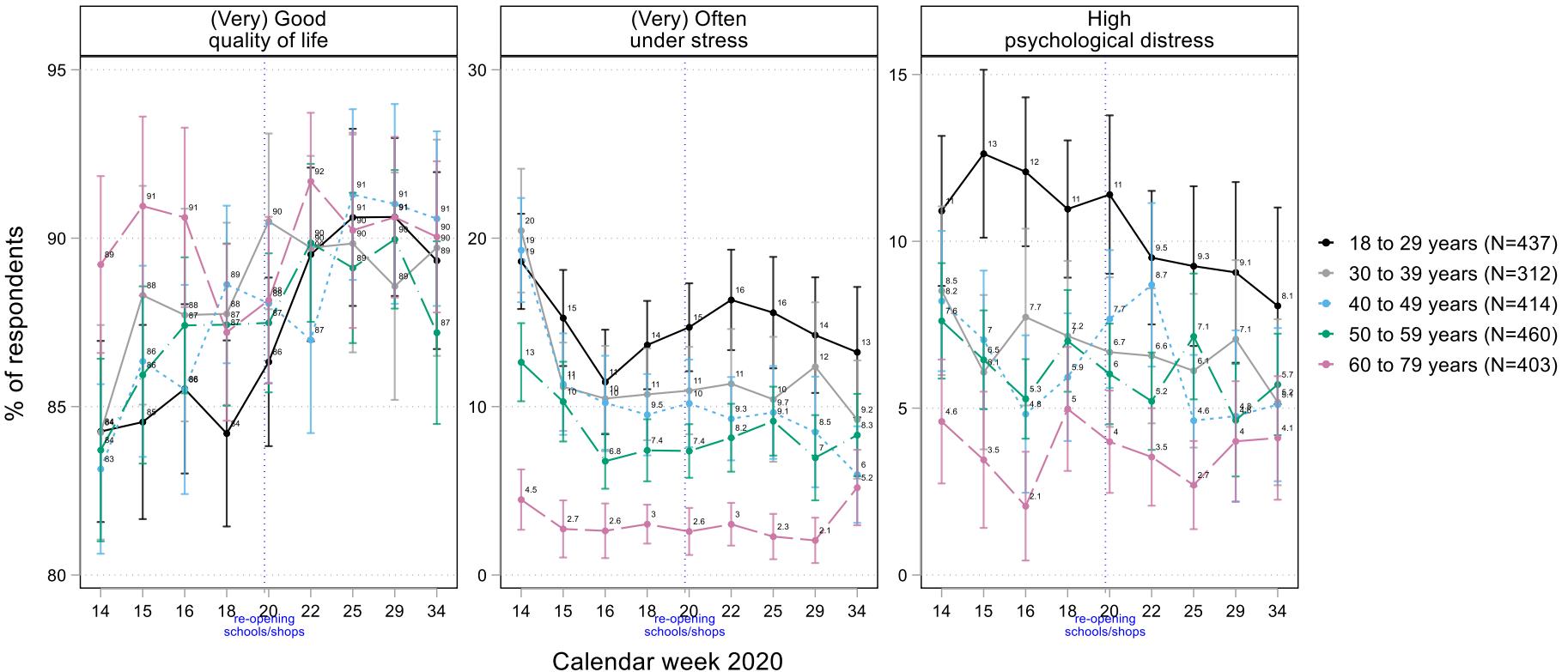
# Results: Quality of life, stress, and psychological burden

Persons with pre-existing conditions (risk groups) show generally lower quality of life but are not differently affected by the pandemic.



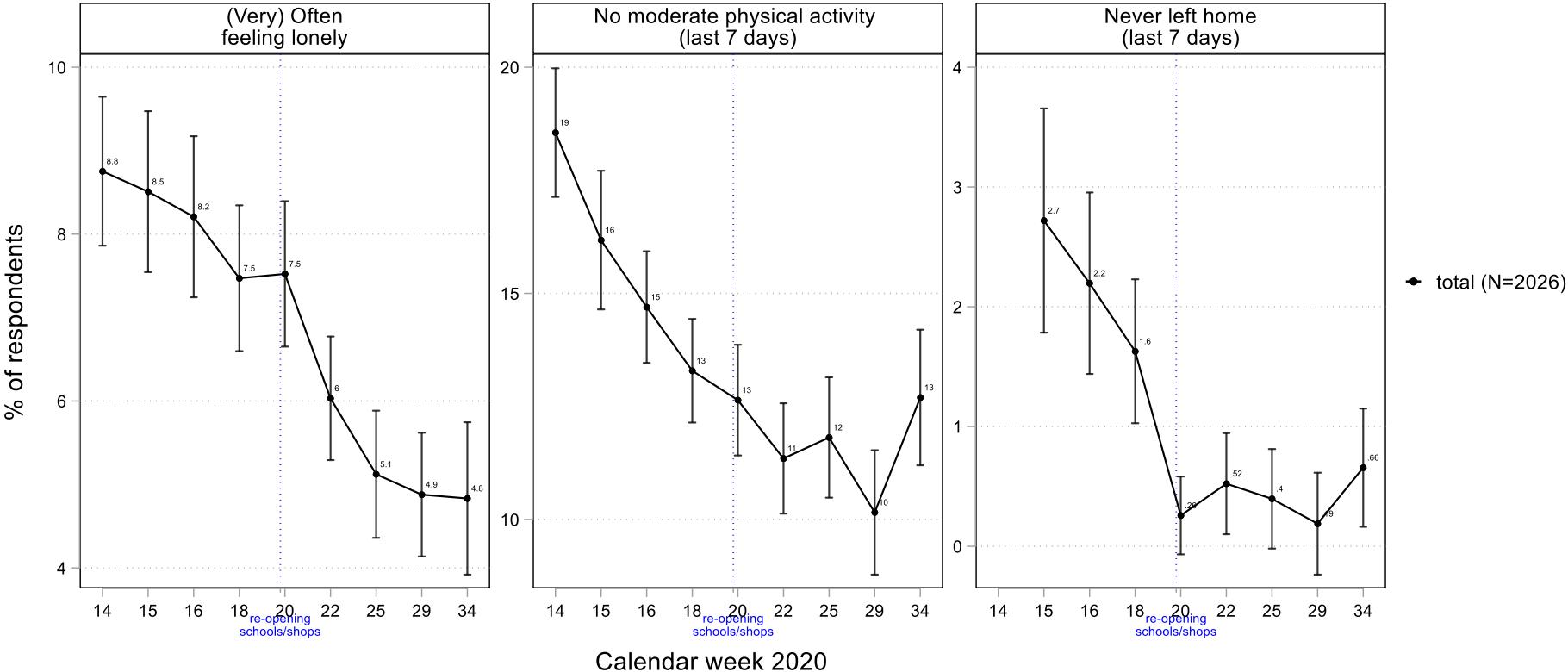
# Results: Quality of life, stress, and psychological burden

More impaired quality of life and more stress during lockdown for the younger compared to the elderly.



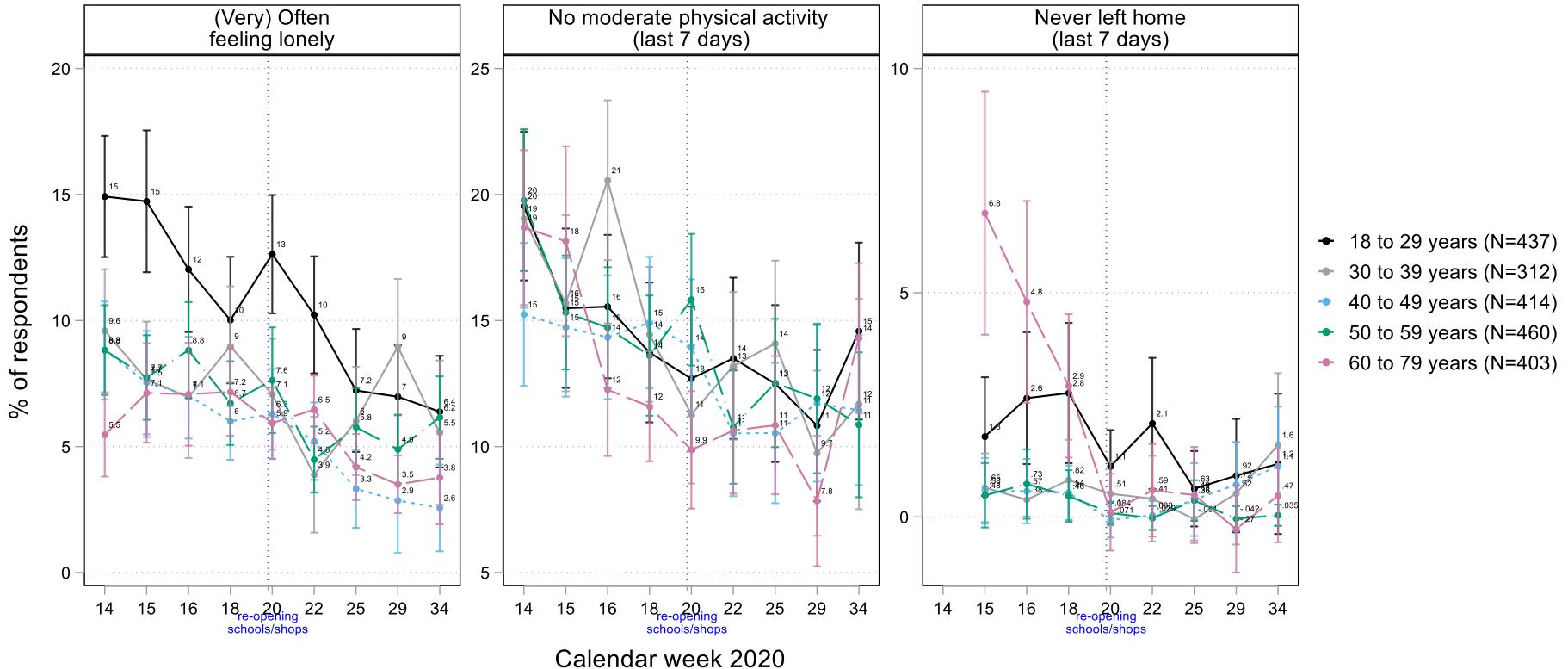
# Results: Loneliness and activities

Heightened feelings of loneliness and less physical activity during lockdown.



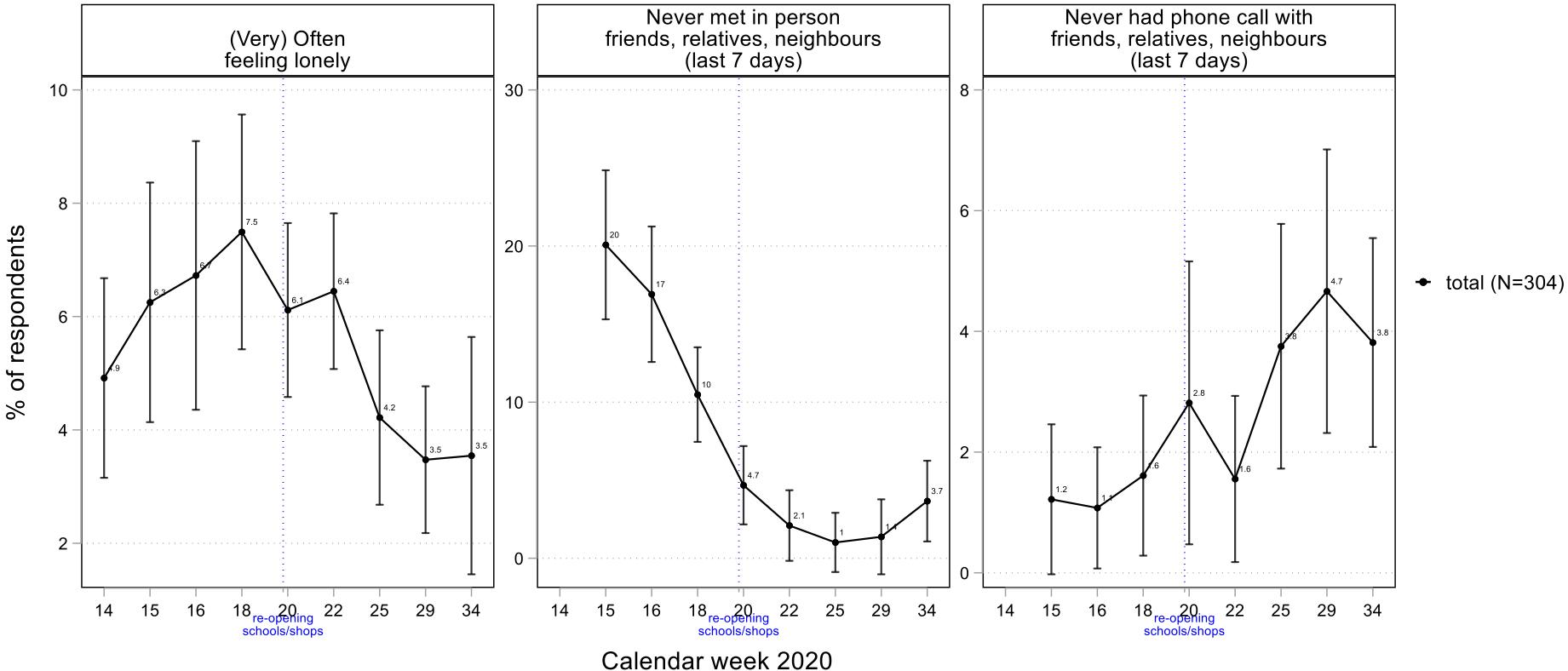
# Results: Loneliness and activities

Especially the young from 18 to 29 often feel lonely during the lockdown.



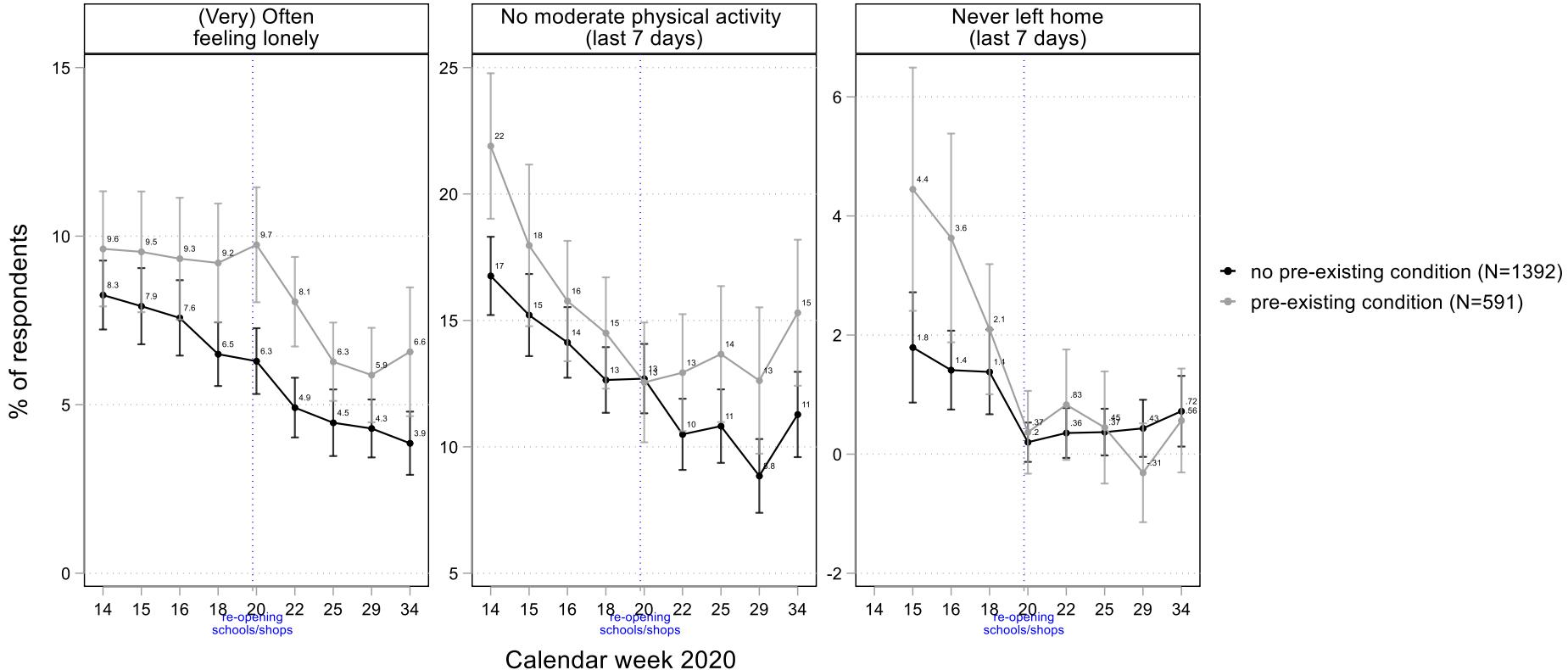
# Results: Loneliness and personal contacts elderly 65+

For the elderly, feelings of loneliness were – on average – less of a problem. Despite up to 20% that never met any friends, relatives, or neighbors during one week.



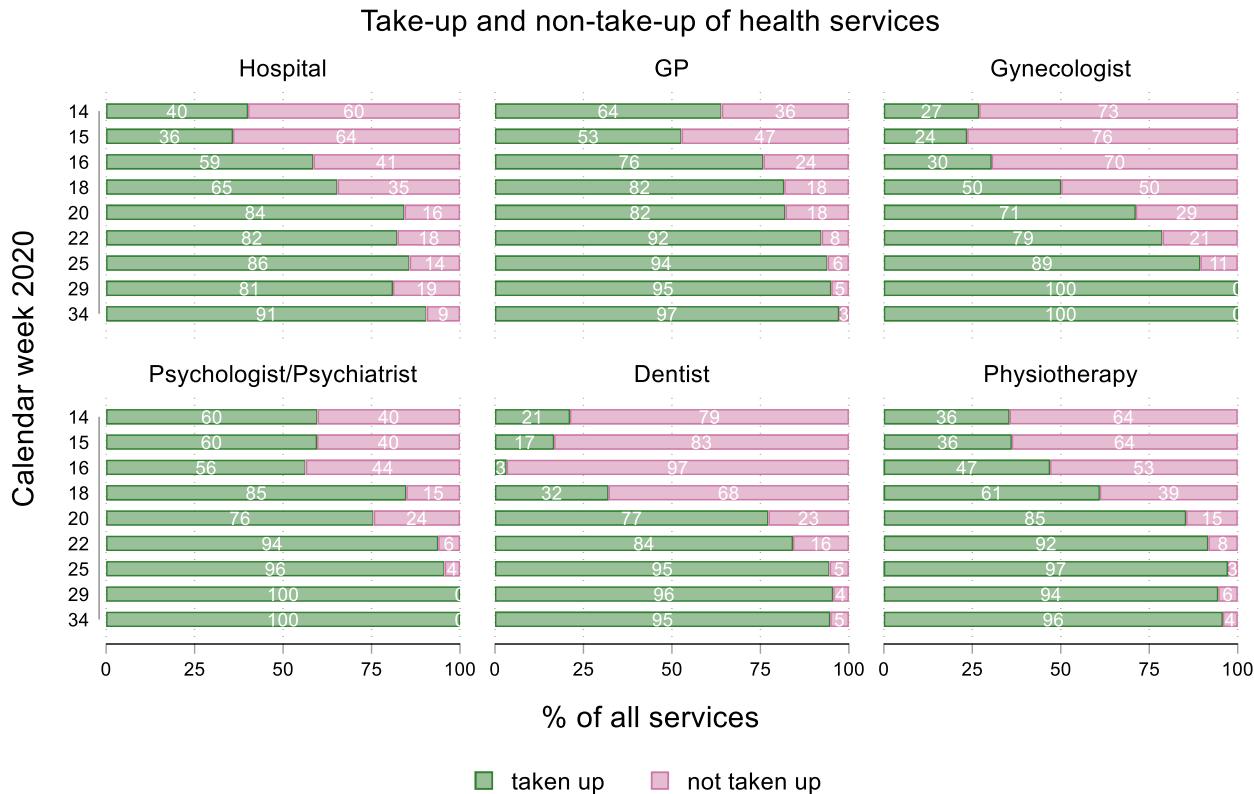
# Results: Loneliness and activities

In general, persons with pre-existing conditions are more affected by loneliness and low levels of activity.



# Results: Non-take-up of health services

Considerable non-take-up of health services during lockdown. Primary care (GPs) much less affected than specialized and hospital care. By end of August, a small degree of non-take-up triggered by the pandemic persists. Any long-term consequences for public health?

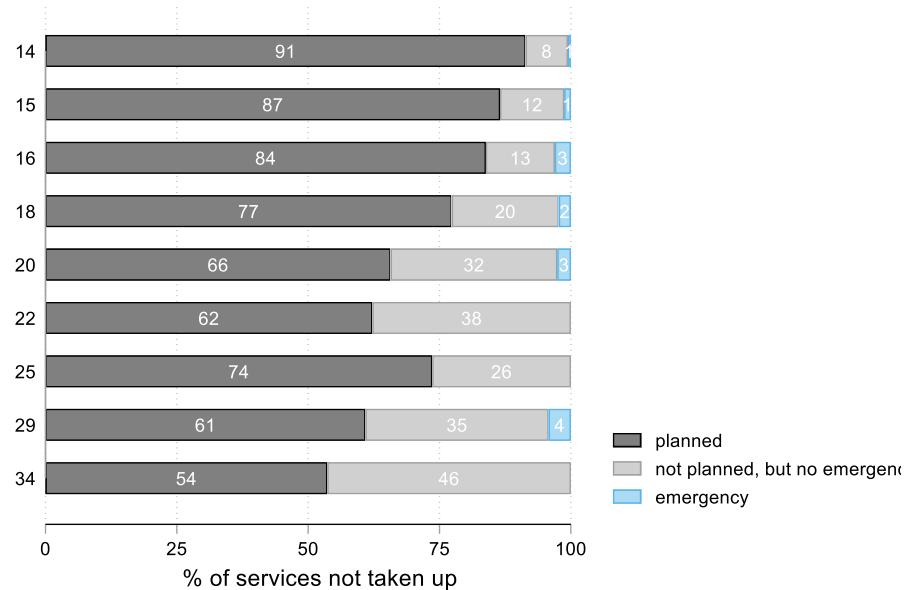


# Results: Health services use

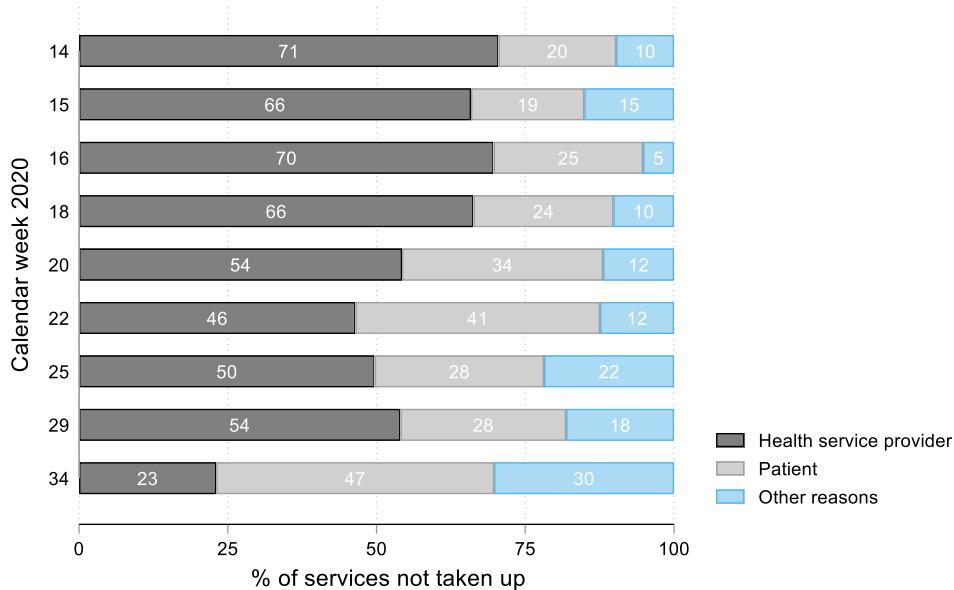
Non-take up mostly for planned appointments, but also some «emergency»-situations (as perceived by respondents).

Non-take up mostly triggered by service providers during lockdown, after the lockdown mostly by patients.

Type of service not taken up

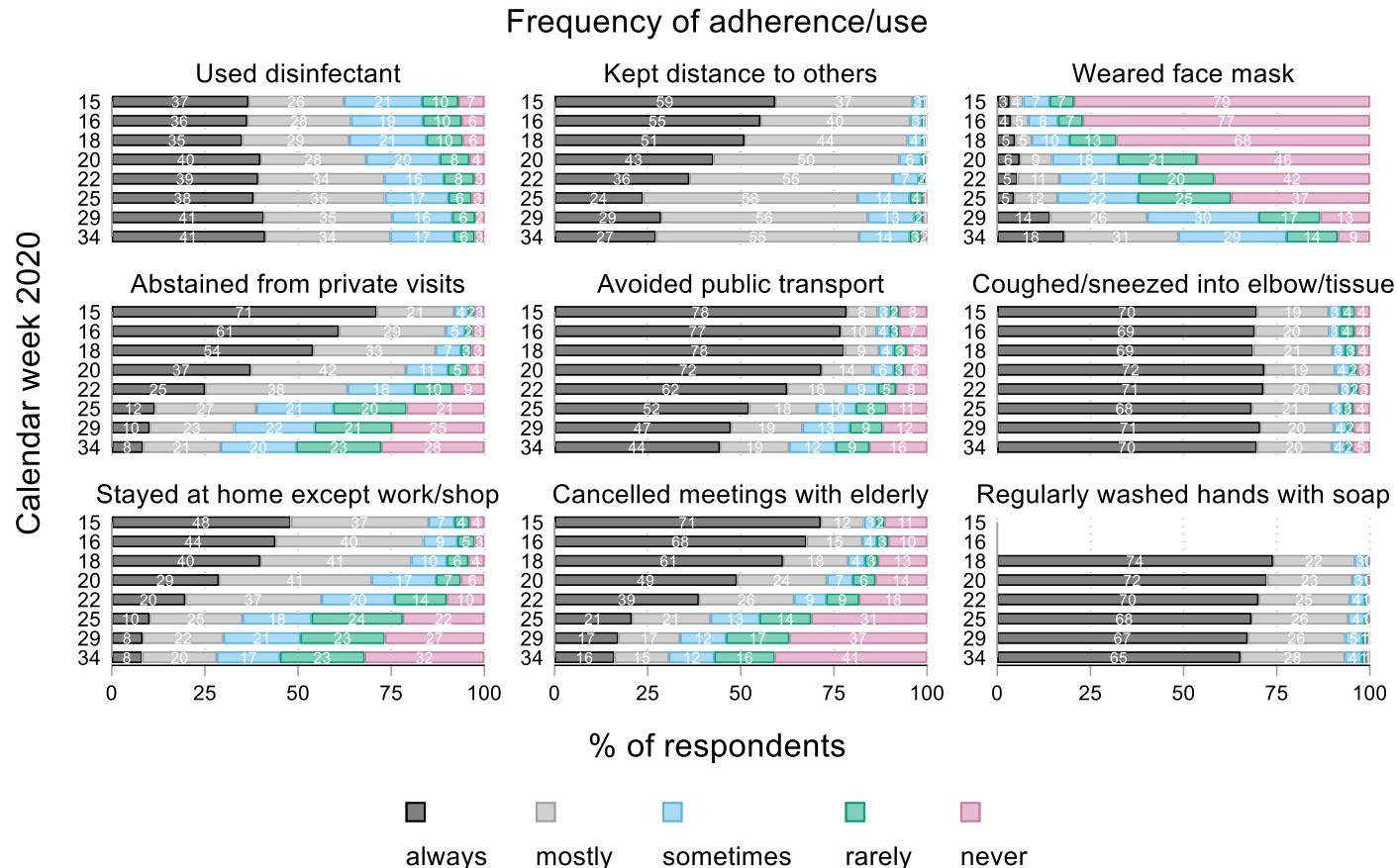


Initiator of non-take-up



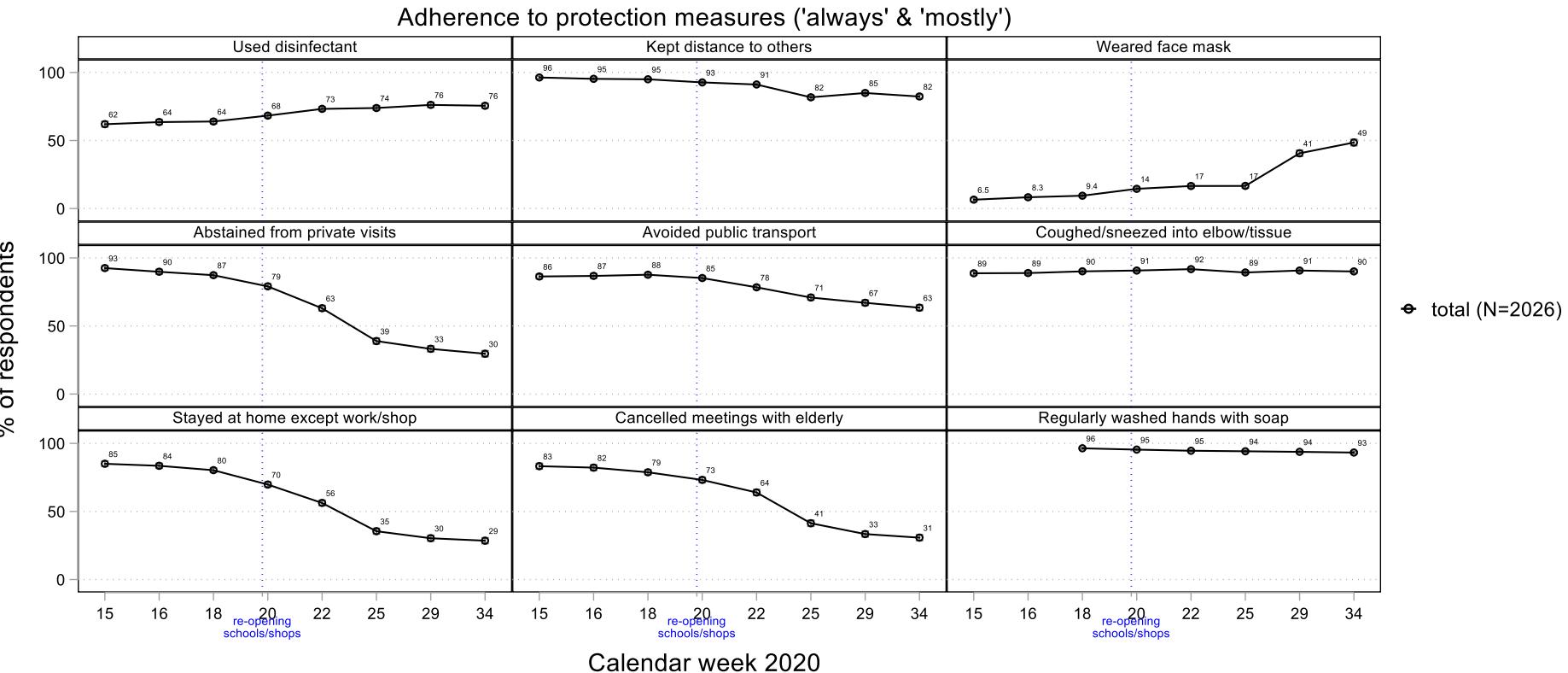
# Results: Individual protection (last 7 days)

High adherence to measures restricting social contacts during lockdown. As intended, gradual ease over time.



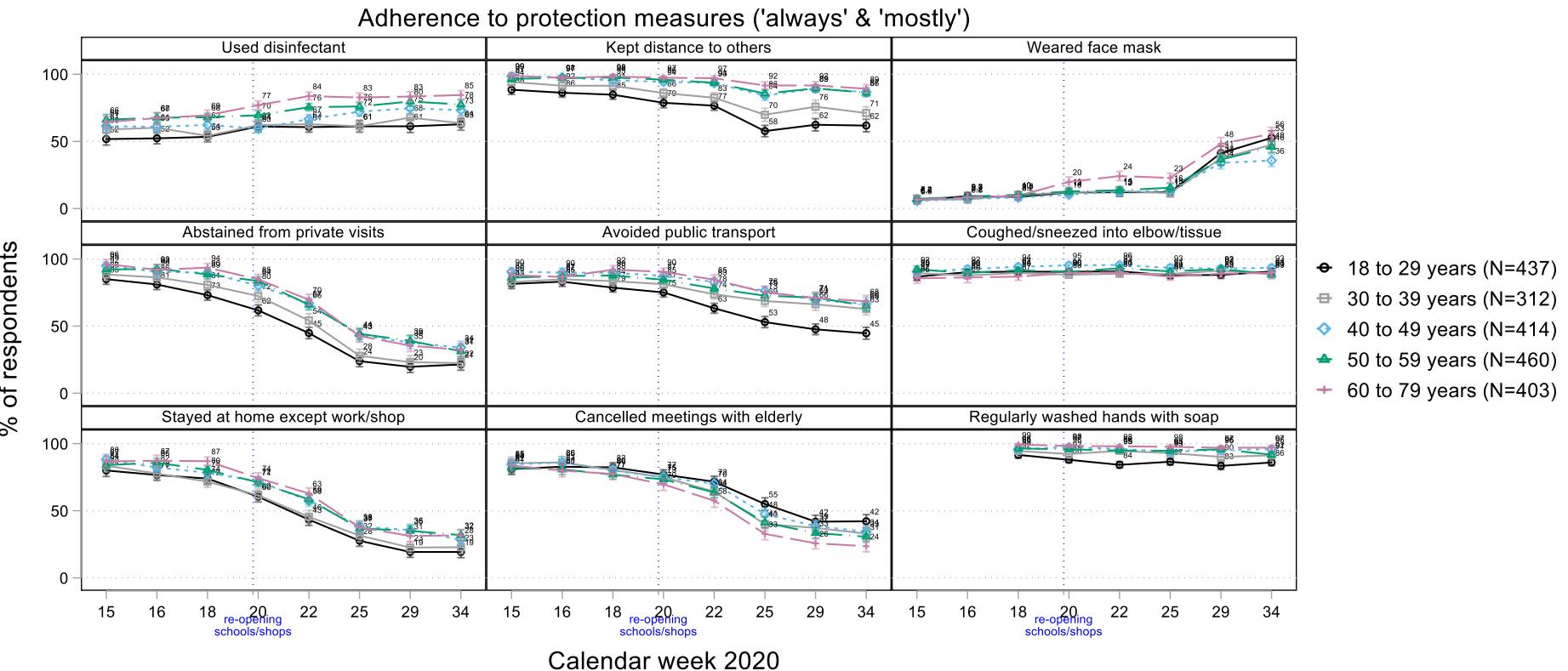
# Results: Individual protection (last 7 days) – Adherence «always»/«mostly»

Not much signs of mounting «lack of discipline» in general. Face mask wearing increased lately.



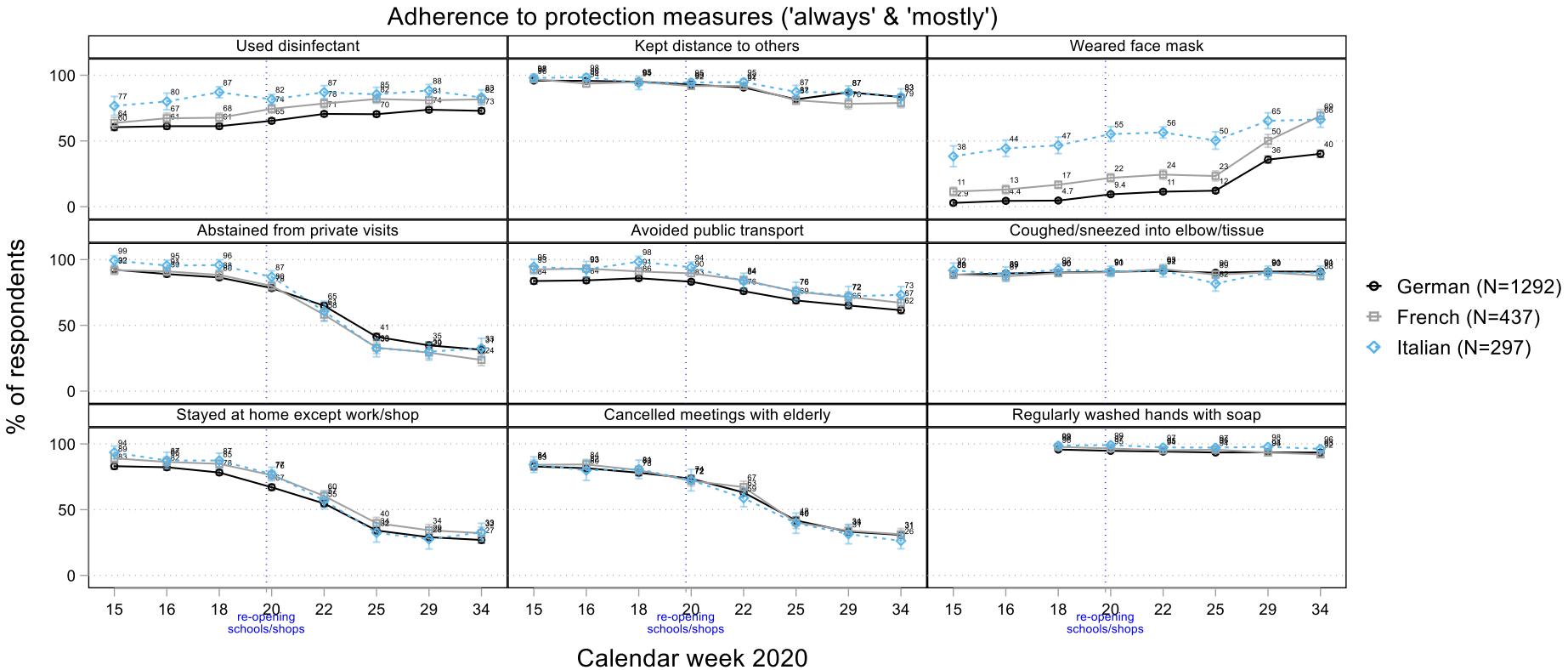
# Results: Individual protection (last 7 days) – Adherence «always»/«mostly»

All age groups showed similarly high adherence during lockdown. The younger show a faster ease of adherence – partly due to their higher involvement in the labor market/education and their higher dependence on public transport.



# Results: Individual protection (last 7 days) – Adherence «always»/«mostly»

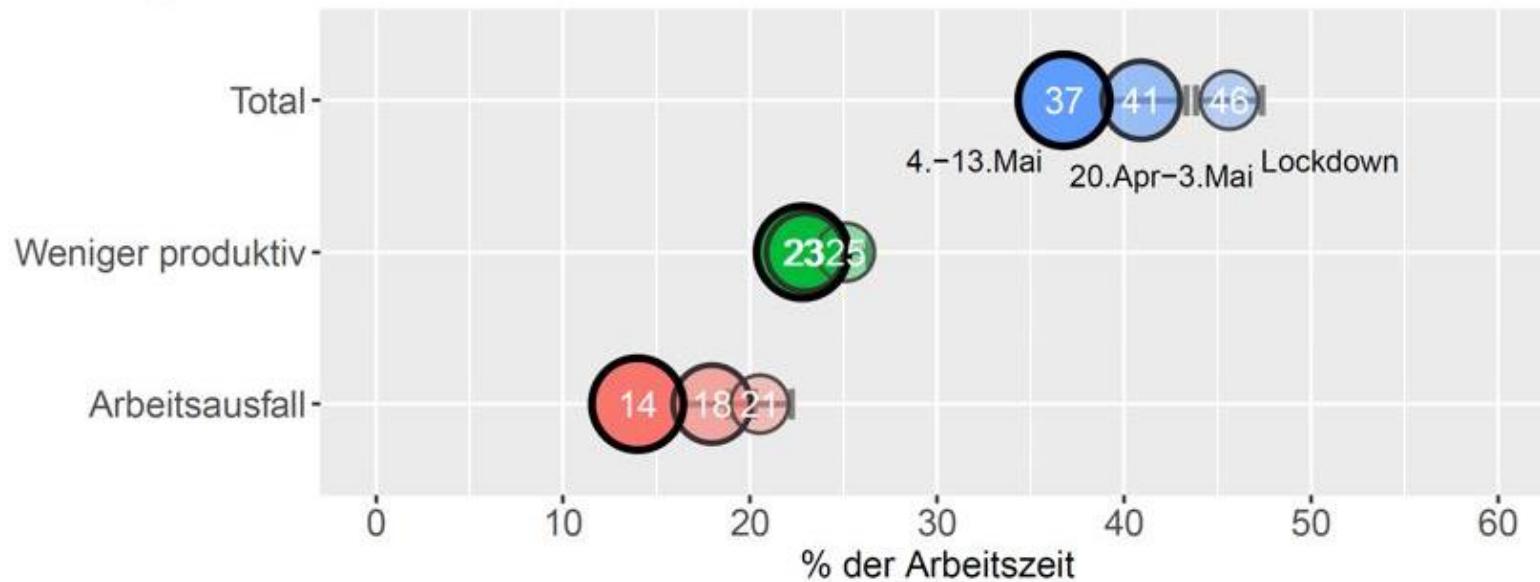
Not much difference between language regions, except for an early widespread (and at the beginning voluntary) use of face masks in the Ticino.



# Results: Productivity loss (by Bea Brunner)

Productivity loss of 46% during full lockdown (March 16 to April 19) which corresponds to CHF 6.2 billion/week.

Abbildung 1: Produktivitätsverluste durch Covid-19 für drei Zeiträume

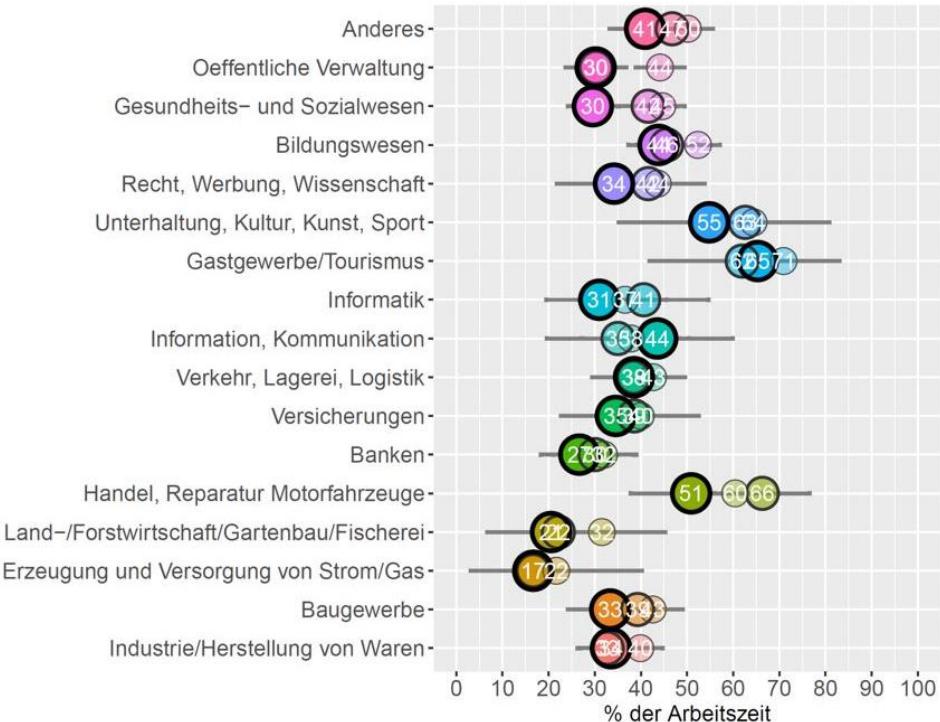


Die Abbildung zeigt die Produktivitätsverluste in % der vollen Arbeitsproduktivität zu drei Zeitpunkten während des Lockdowns, insgesamt und nach Quelle (geringere Produktivität und Arbeitsausfall). Die Resultate sind ungewichtet. Quelle: COVID-19 Social Monitor.

# Results: Productivity loss (by Bea Brunner)

Various lines of business are affected in a very different way.

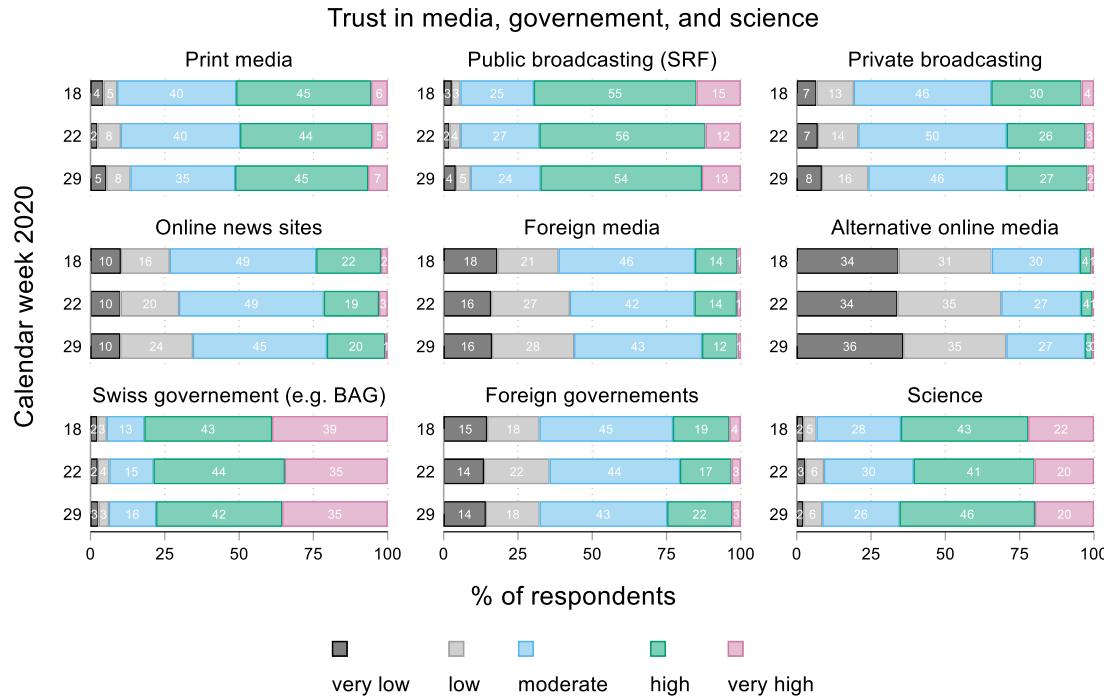
Abbildung 1: Produktivitätsverluste durch Covid-19 für drei Zeiträume nach Branche



Die Abbildung zeigt die Produktivitätsverluste in % der vollen Arbeitsproduktivität zu drei Zeitpunkten während des Lockdowns nach Branche. Die Resultate sind ungewichtet. Quelle: COVID-19 Social Monitor.

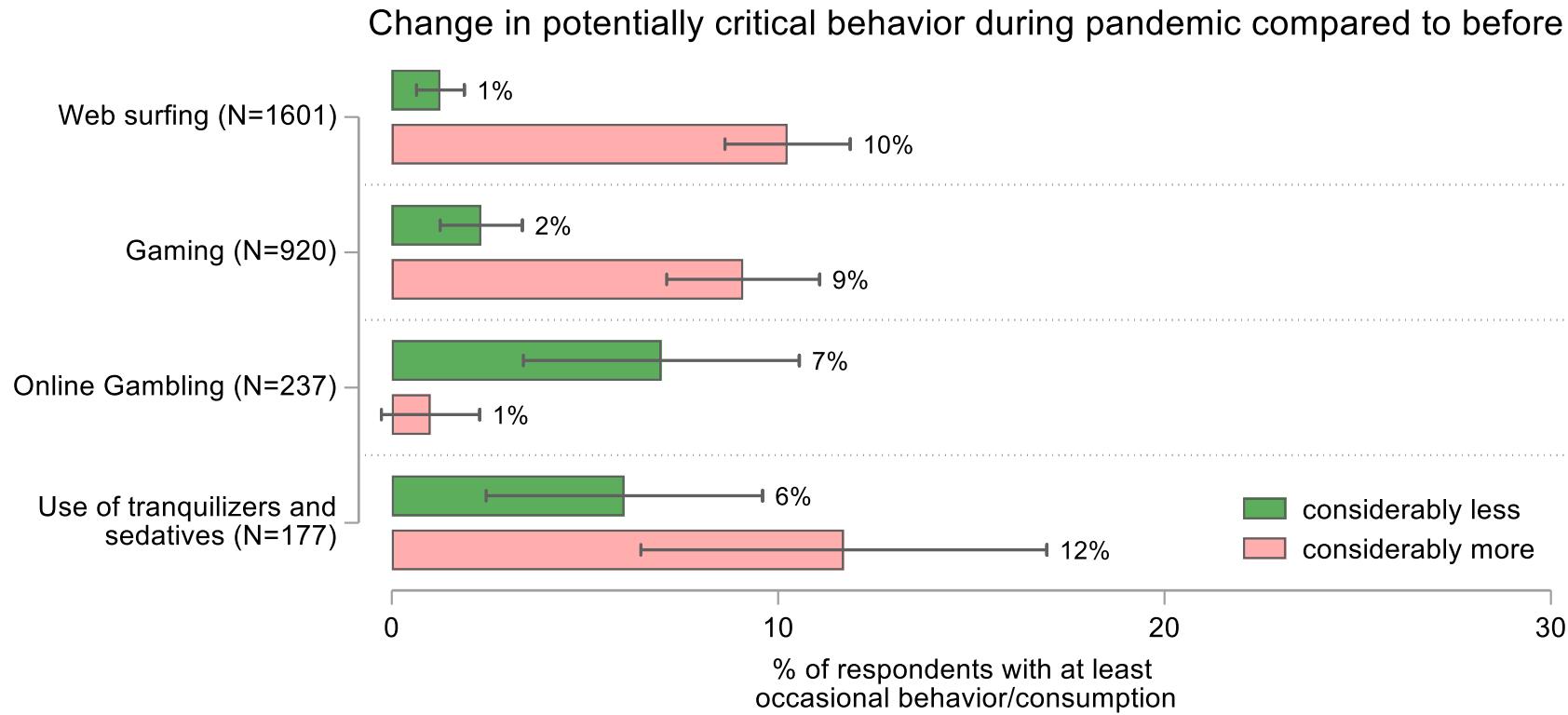
# Results: Trust in Media, Government and Science

Despite increasing discussions and criticisms about the suitability of certain measures, trust in public broadcasting, government and science remains at a high level.



# Results: Change in potentially critical behavior (for FOPH)

More web surfing, more gaming, but less online gambling compared to before the pandemic.



# Results: Proximity tracing app uptake (von Wyl et al., submitted)

Low app uptake, also among the young. Low rate of triggered notifications, as well as ignored app notifications.

## Are COVID-19 proximity tracing apps working under real-world conditions? Indicator development and assessment of drivers for app (non-)use

Viktor von Wyl<sup>1,2</sup>, Marc Höglinder<sup>3</sup>, Chloé Sieber<sup>1</sup>, Marco Kaufmann<sup>1</sup>, André Moser<sup>1</sup>, Miquel Serra-Burriel<sup>1</sup>, Tala Ballouz<sup>1</sup>, Dominik Menges<sup>1</sup>, Anja Frei<sup>1</sup>, Milo A. Puhan<sup>1</sup>

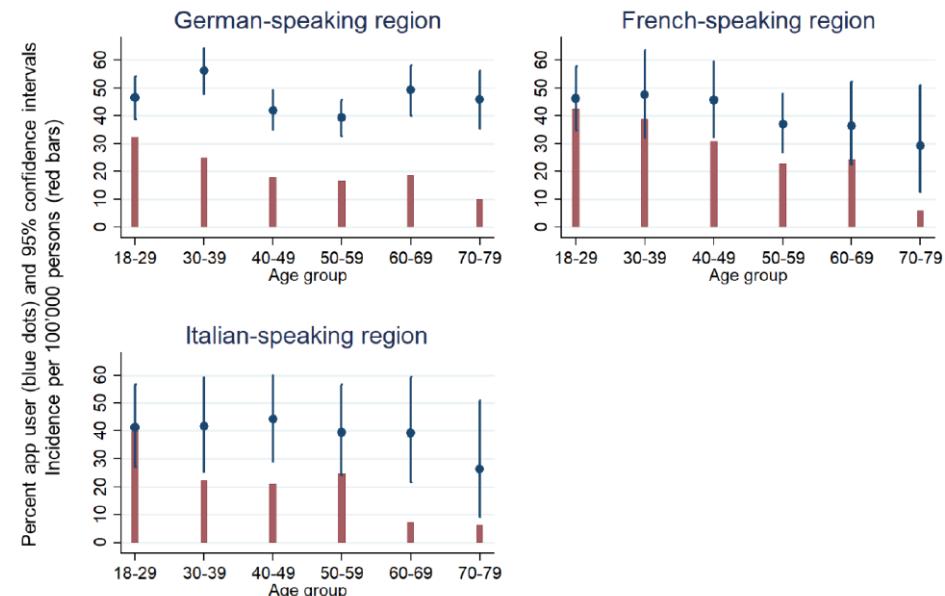
### Abstract

Digital proximity tracing (DPT) apps have been released to mitigate SARS-CoV-2 transmission, but it remains unclear how their effectiveness should be monitored. The aim of this study was to formalize indicators for measuring the fulfillment of assumptions for appropriate proximity tracing app functioning.

Six indicators were developed to monitor the SwissCovid app functioning and effectiveness in the Swiss population. Using official statistics and survey data, we calculated indicator values and examined socio-demographic factors associated with the SwissCovid app utilization. Indicators show that 1 in 3 adults in Switzerland have downloaded the app. However, only 15% of new cases also triggered DPT-app notifications, and indicators also reveal ignored app notifications. In the full survey sample ( $n=2'098$ ), higher monthly household income or being a non-smoker were associated with higher SwissCovid app uptake; older age or having a non-Swiss nationality with a lower uptake. In a subsample including more detailed information ( $n=701$ ), high trust in health authorities was associated with higher SwissCovid app uptake.

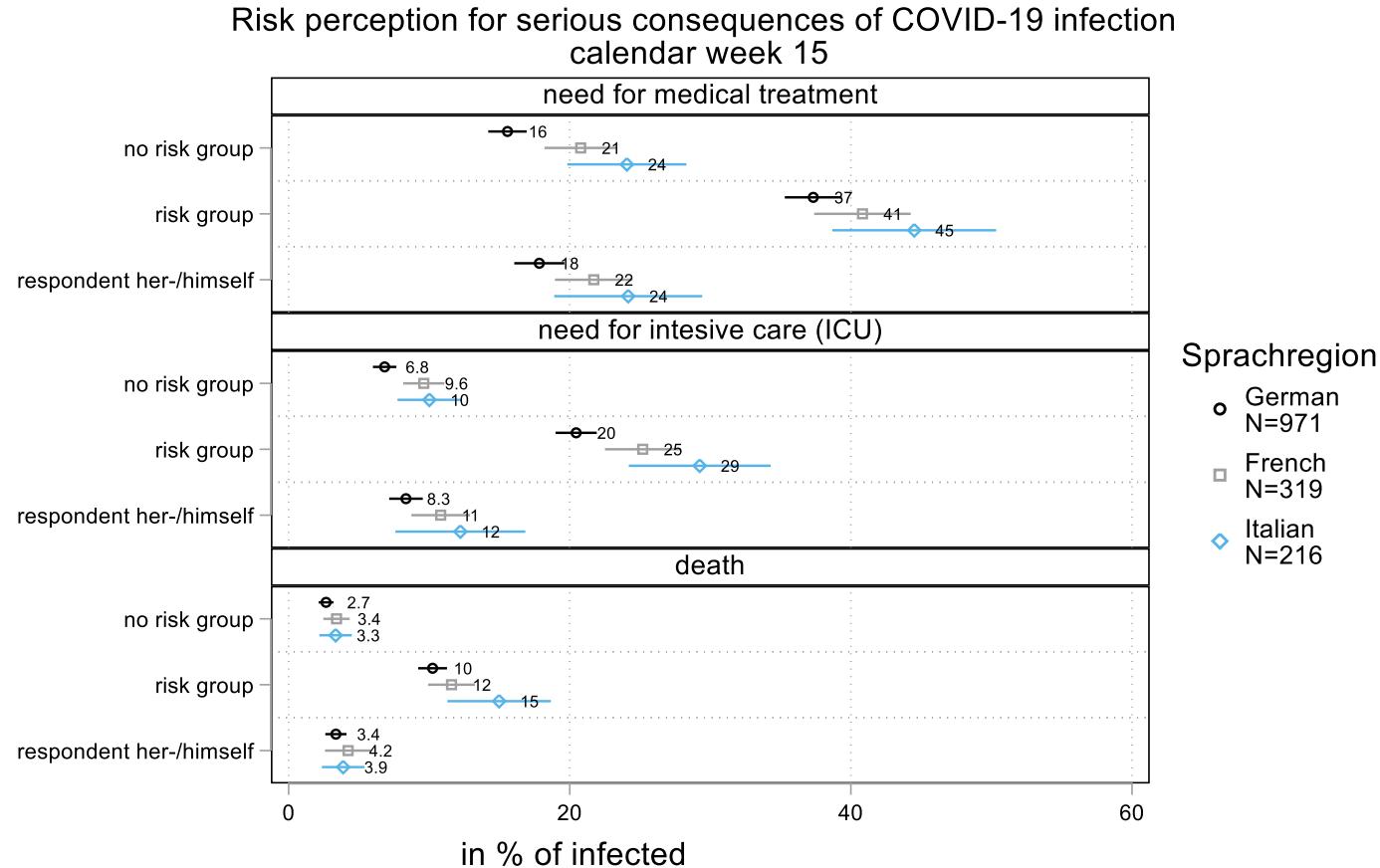
The indicators help to monitor key drivers of DPT-apps effectiveness and hint to non-compliance issues. Streamlining procedures, removing technical hurdles, and communicating the usefulness of DPT-apps are crucial to promote uptake, compliance, and ultimately effectiveness of DPT-apps for pandemic mitigation.

Figure 2: Observed app uptake (% app users, blue lines) with 95% confidence intervals and Covid-19 incidence (new cases per 100'000 inhabitants, red bars), stratified by age groups and Swiss language regions



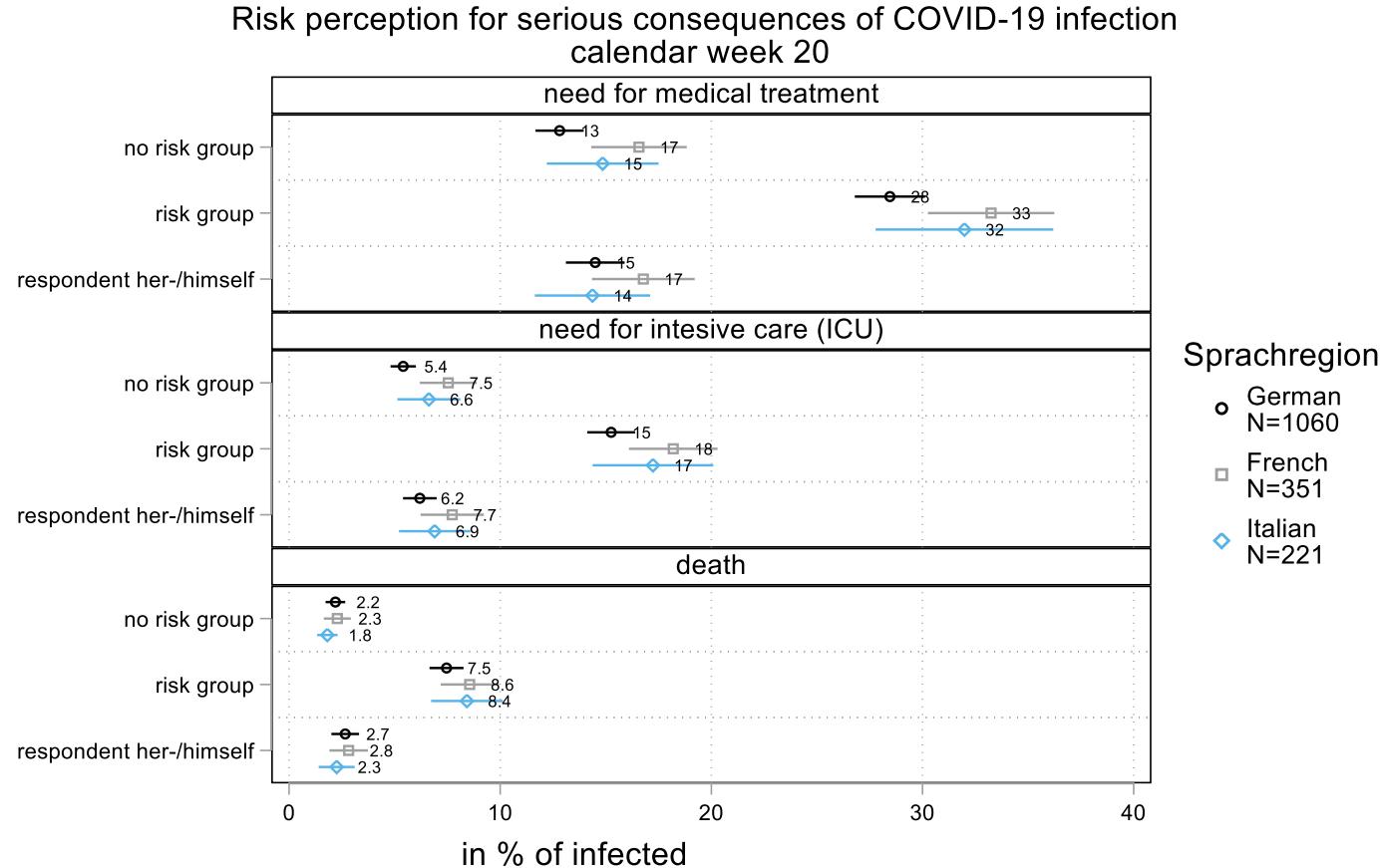
# Results: Individual risk perception

Different risk perception of COVID-19 infection by language region at beginning.



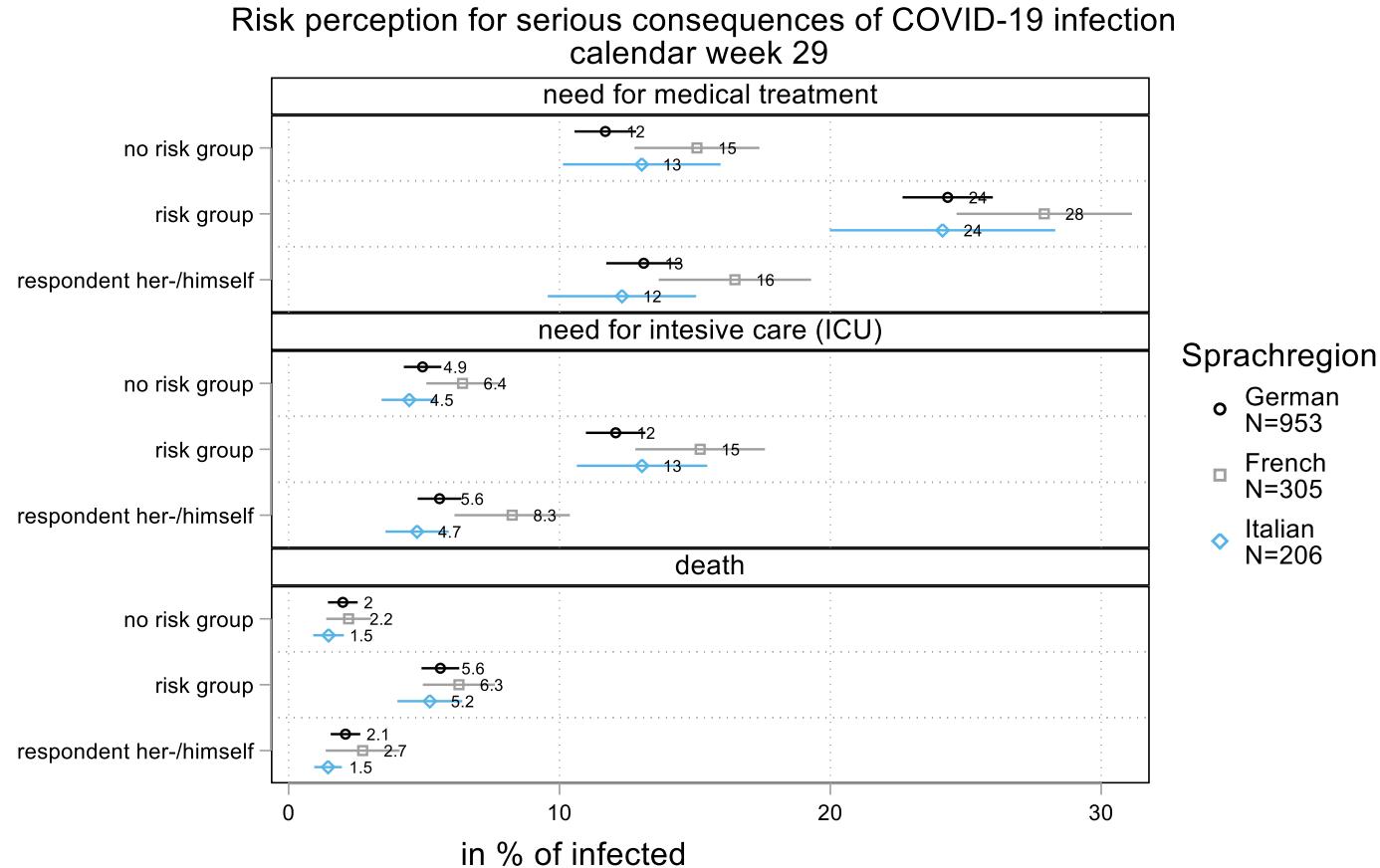
# Results: Individual risk perception

Convergence and decreasing perceived risk, especially for risk groups.



# Results: Individual risk perception

Different risk perception of COVID-19 infection by language region at beginning.



# Discussion

- Our population-based online panel
  - provides timely information about relevant social and public health aspects of the Swiss population during the COVID-19 pandemic
  - is able to follow survey participants over the course of the pandemic to monitor health and behavioral changes over time on an individual (not only aggregated) level
  - allows us to make conclusions about the impact of public health measures on various domains
  - our study findings can inform evidence-based decisions and policymaking
  - provides a data source for studies on a broad range of aspects of the COVID-19 pandemic and its impact on the population
- Limitations:
  - due to the data collection (online survey using an access-panel) there is likely some selectivity regarding, e.g., online-affinity and education, that must be addressed using statistical adjustment methods
  - possible under- or even non-representation of specific subpopulations (individuals with chronic diseases, lower education level, vulnerable groups, persons with serious health conditions)
  - possible under-estimation of adverse effects
  - data based on self-reported outcomes which are prone to misdiagnosis of health conditions

# References

## Artikel

- Höglinger, M. (2020). Substanzeller Einbruch bei medizinischen Behandlungen im Lockdown. *Zürcher Ärztezeitung, Nr. 2, Sonderausgabe, 10-12.*
- Moser, A., Carlander, M., Wieser, S., Hämmig, O., Puhan, M. A. P., & Höglinger, M. (submitted). The COVID-19 social monitor longitudinal online panel: Real-time monitoring of social and public health consequences of the COVID-19 emergency in Switzerland.
- von Wyl, V., Höglinger, M., Sieber, C., Kaufmann, M., Moser, A., Serra Burriel, M., Puhan, M. A. (submitted). Are COVID-19 proximity tracing apps working under real-world conditions? Indicator development and assessment of drivers for app (non-)use.

## Zeitschriftenbeiträge/Medienmitteilungen

- Faller, P., Heiniger, S., Höglinger, M. (1. Juli 2020) Wie geht es uns im Ausnahmezustand. ZHAW-Impact.
- Höglinger, M., Hämmig, O. (17. April 2020) Deutlich weniger Arztbesuche und Spitalbehandlungen im Lockdown. Medienmitteilung ZHAW School of Management and Law und Universität Zürich.

## Blogbeiträge

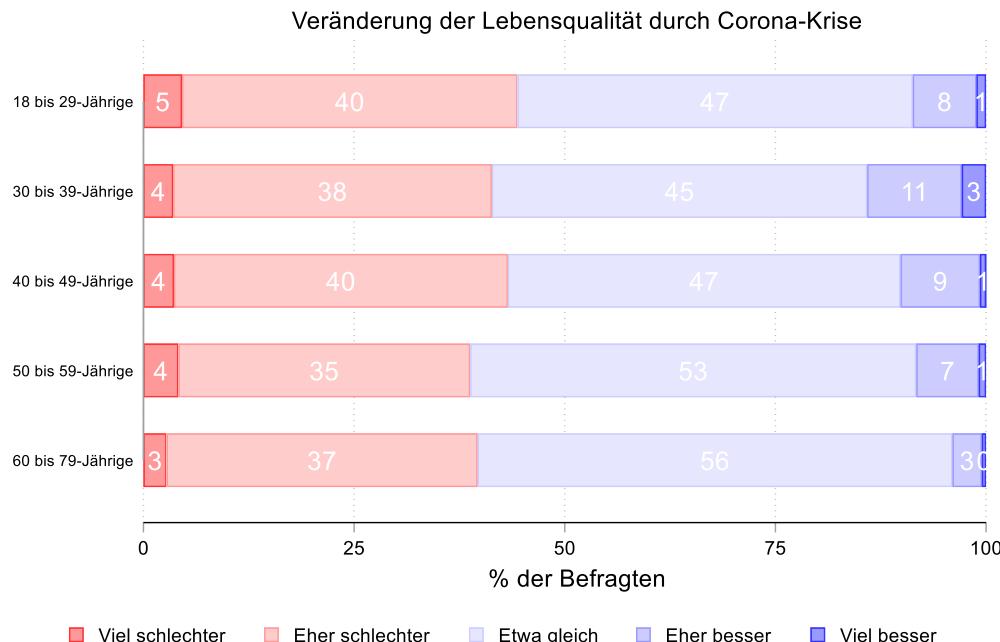
- Brunner, B. (9. Juli 2020) Die Krise nach der Krise – So hoch sind die Produktivitätsverluste wegen Covid-19.  
<https://blog.zhaw.ch/gesundheitsoekonomie/2020/07/09/die-krise-nach-der-krise-so-hoch-sind-die-produktivitaetsverluste-wegen-covid-19/>
- Heiniger, S. (2. Juli 2020) CORONA-Lockdown drückt Lebenszufriedenheit von Personen aus stark betroffenen Wirtschaftsbranchen.  
<https://blog.zhaw.ch/gesundheitsoekonomie/2020/07/02/corona-lockdown-drueckt-lebenszufriedenheit-von-personen-aus-stark-betroffenen-wirtschaftsbranchen/>
- Höglinger, M. (9. April 2020) COVID-19 Social Monitor - Zeitnahe Monitoring der Auswirkungen der COVID-19-Pandemie auf die Schweizer Bevölkerung.  
<https://blog.zhaw.ch/gesundheitsoekonomie/2020/04/09/covid-19-social-monitor-zeitnahe-monitoring-der-auswirkungen-der-covid-19-pandemie-auf-die-schweizer-bevoelkerung/>
- Höglinger, M. (20. Mai 2020) Nicht-Beanspruchung medizinischer Behandlungen wegen Corona-Pandemie weiterhin substanzell - aber abnehmend.  
<https://blog.zhaw.ch/gesundheitsoekonomie/2020/05/20/nicht-beanspruchung-medizinischer-behandlungen-wegen-corona-pandemie-weiterhin-substanziell-abnehmend/>

# Geplante Studien/Publikationen

- Produktivitätsverluste durch die Pandemie
  - Simon Wieser, Bea Brunner
- Versorgungssituation/Nichtinanspruchnahme
  - Marc Höglinger et al.
- Präventionsverhalten
  - Klaus Eichler, Marc Höglinger
- Chronisch krank zu Zeiten von COVID-19:  
Einstellungen, Wohlbefinden und  
Präventionsmassnahmen
  - Viktor von Wyl (EBPI), Chloe Sieber, André Moser, Marc Höglinger
- Psychische Belastung der  
Allgemeinbevölkerung
  - Rebecca Brauchli, Oliver Hämmig, André Moser, Marc Höglinger
- Soziale Isolation, Einsamkeit mit Fokus  
ältere Bevölkerung
  - Flurina Meier
- Freiwilligenarbeit in COVID-19-Zeiten
  - Florian Liberatore et al.
- Und???

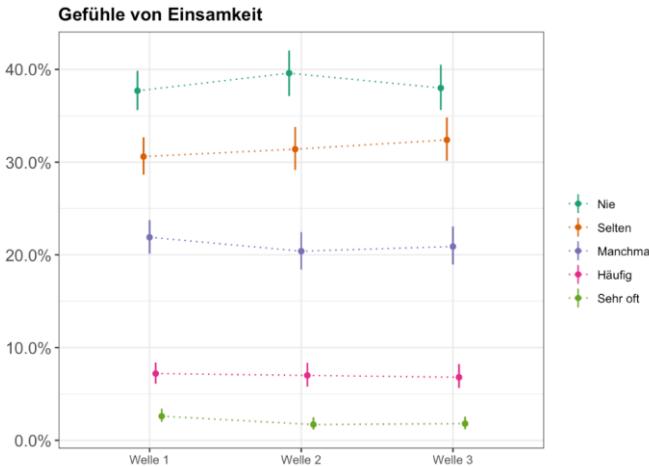
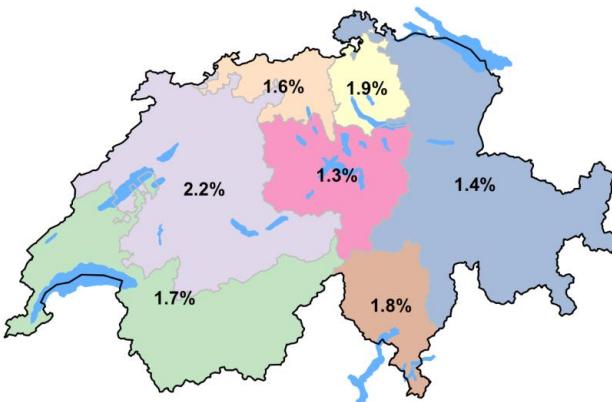
# Lebensqualität

- Auswirkungen auf die Lebensqualität: Junge etwas stärker negativ beeinträchtigt



# Einsamkeit und soziale Isolation

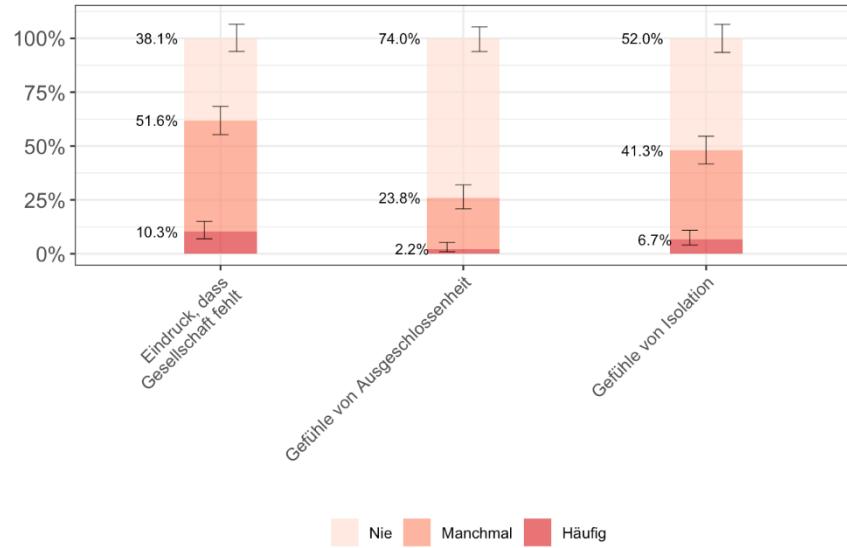
Anteil mit «sehr oft» Gefühlen von Einsamkeit  
Covid-19 Social Monitor, Woche 5 des Lockdown



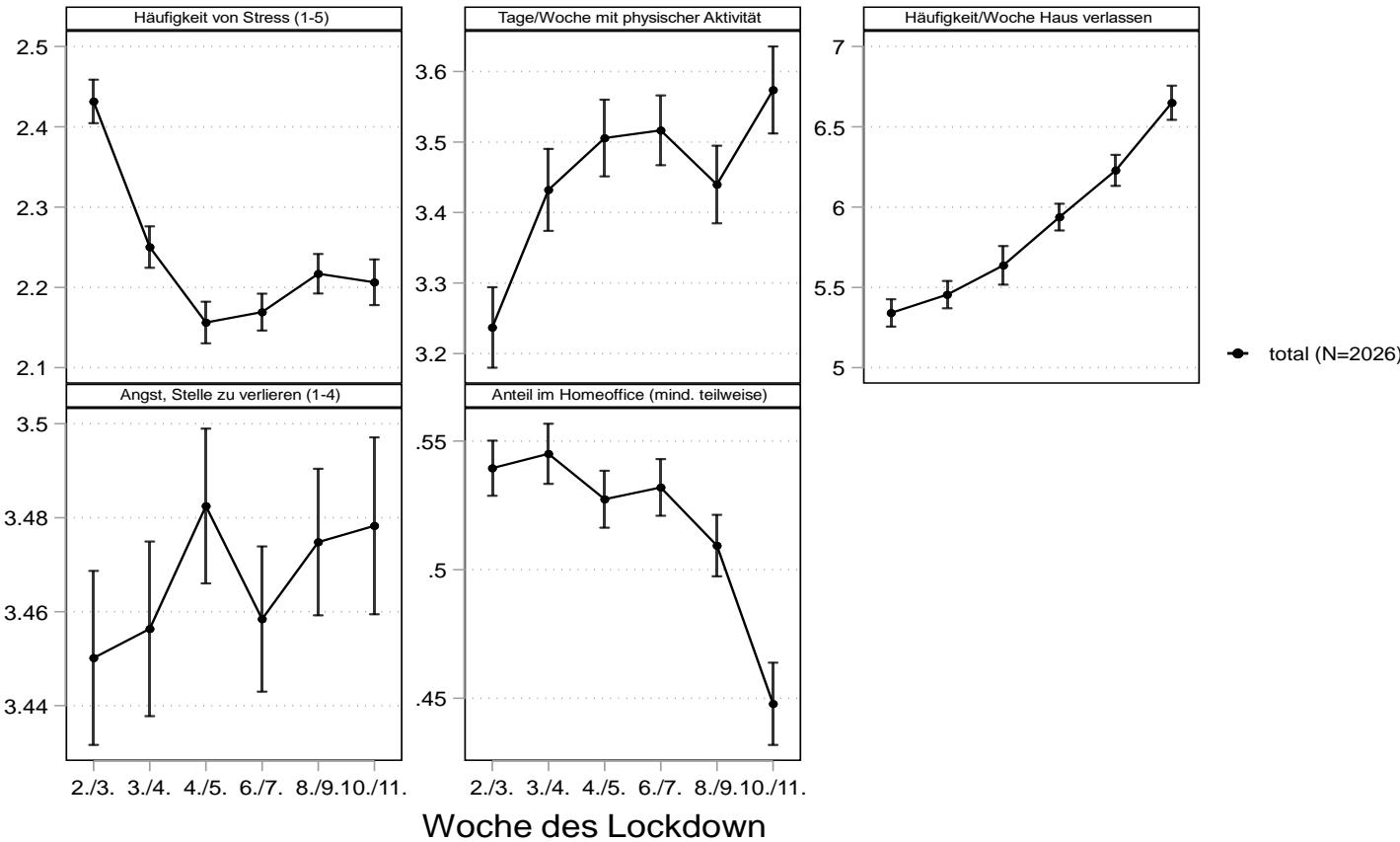
- Einsamkeit in der Gesamtbevölkerung etwa auf gängigem Niveau (1/3 hat mind. «Manchmal» Einsamkeitsgefühle)
- Soziale Isolation bei der Bevölkerung 65+:

## Einsamkeit und soziale Isolation 65+

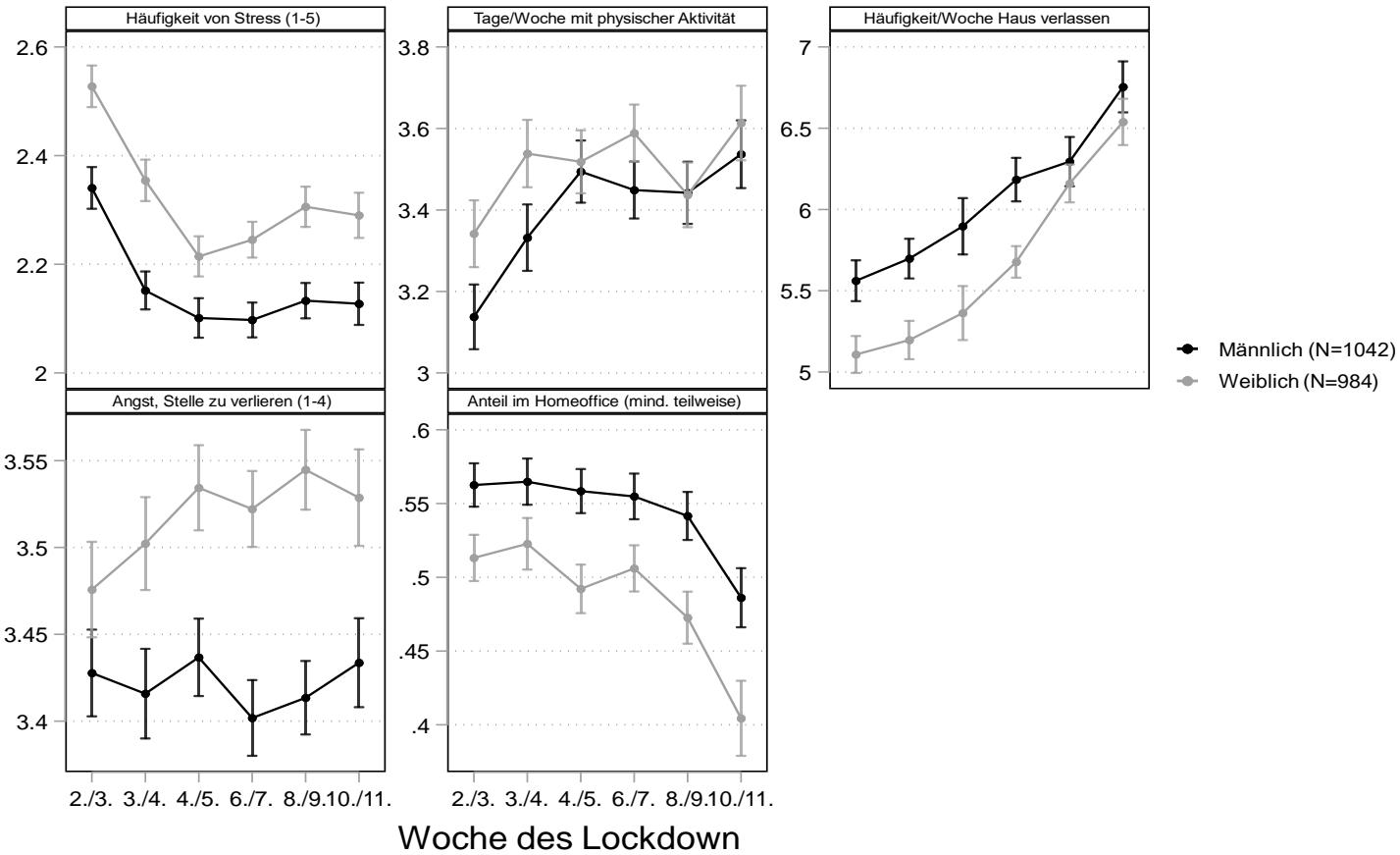
(Population: 65 Jahre oder älter)



# Physische Aktivitäten, Erwerbsarbeit



# Physische Aktivitäten, Erwerbsarbeit



# Erwerbsarbeit

