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Satisfaction of scientists during the Covid-19 pandemic lockdown

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Satisfaction of scientists during the COVID-19 pandemic lockdown

Isabel J. Raabe ¹✉, Alexander Ehlert ¹, David Johann^{1,2} & Heiko Rauhut^{1,2}

The discussion of the social, political and economic consequences of the lockdown during the COVID-19 pandemic mainly revolves around negative effects. This study exploits a unique opportunity and analyses data from a survey ($N = 13,316$) that happened to be in the field in the months of the development and eventual manifestation of the COVID-19 pandemic. It documents slightly higher levels of average general life satisfaction as well as of satisfaction with various specific aspects of life (health, work, work-life balance and leisure) during the lockdown among scientists in Austria, Germany and Switzerland. It is argued that the lock-



The Covid-19 pandemic as a quasi-natural experiment

March 11 2020: WHO declares the spread of Covid-19 to be a pandemic → “lockdown” in many countries

- Social distancing
- Home office
- Shut-down of educational facilities and non-essential businesses
- Border closure & travel restrictions

- The pandemic lockdown = exogenous shock to public and private life
- Unique opportunity for researchers

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Is the lockdown beneficial to scientists' satisfaction?

What can we learn from this?



The Zurich Survey of Academics

Project team: Prof. Dr. Heiko Rauhut, Dr. David Johann, Dr. Julia Jerke, Justus Rathmann, Antonia Velicu

- **Survey period: February to April 2020!**

Overview

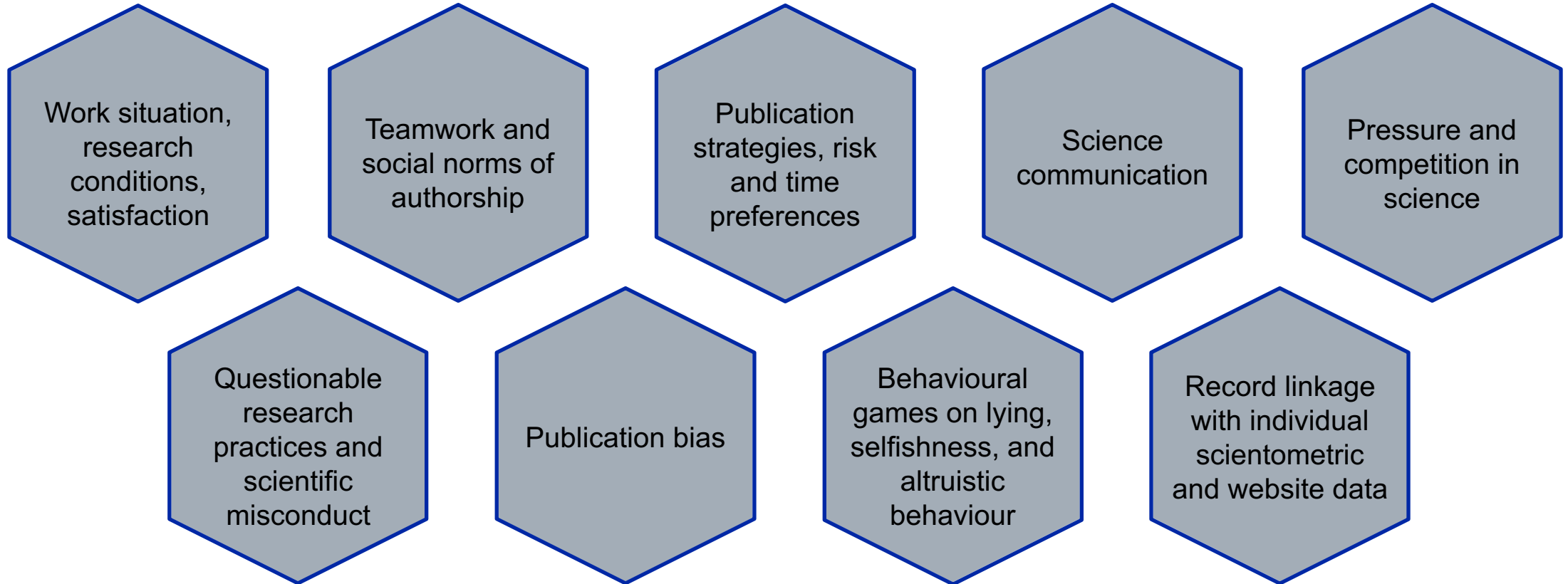
- Large-scale and representative web survey among scientists at universities in Austria, Germany, and Switzerland (DACH region)
- Part of the SNF project "Social Norms, Cooperation and Conflict in Scientific Collaborations" (CONCISE)

Implementation

- Approx. 150.000 scientists in the DACH region have been contacted
- Final sample: N = 15'778 scientists from 263 universities (response rate approx. 11.2%)



Topics covered in the survey



Survey report “**The Zurich Survey of Academics: Methods, Design, and Data**”

Rauhut, H., Johann, D., Jerke, J., Rathmann, J., Velicu, A. (2020). The Zurich Survey of Academics: Methods, Design, and Data. Zurich: University of Zurich.

<https://www.zora.uzh.ch/id/eprint/204689>



The Zurich Survey of Academics

Project team: Prof. Dr. Heiko Rauhut, Dr. David Johann, Dr. Julia Jerke, Justus Rathmann, Antonia Velicu

- **Survey period: February to April 2020**
- Invitations to participate were sent in daily batches over a period of more than two months
- Able to compare scientists that responded before and those who responded after the lockdown was implemented
- an average of around 207 responses per day was obtained during the 77-day field period

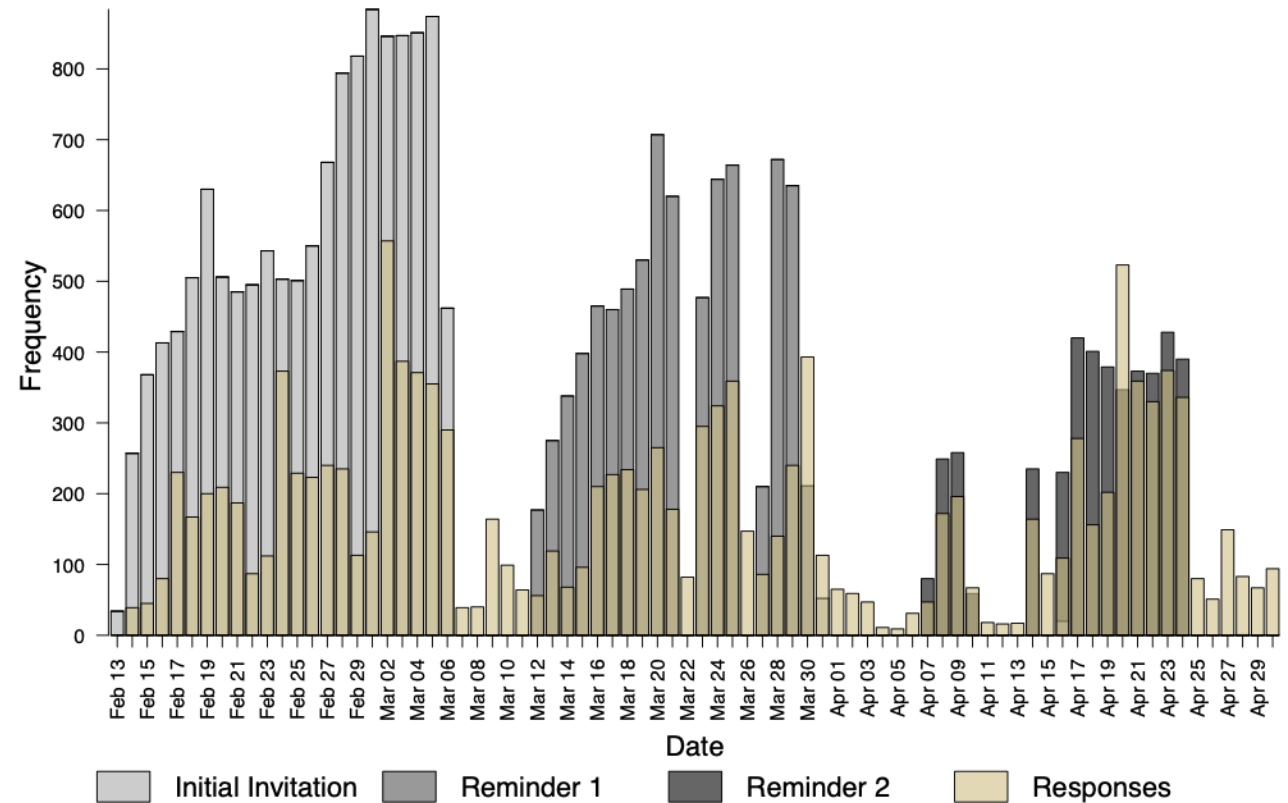


Fig. 1. Scientists' satisfaction over time.



Outcome of interest: Life satisfaction

- “All in all, how satisfied or unsatisfied are you currently with your life?”
- Plus: work; work-life balance; leisure; health
- All scales range from -5 (totally unsatisfied) to +5 (totally satisfied)
- Also included: demographics, work conditions and publication behaviour, the exact time of respondents' participation in the study

Results

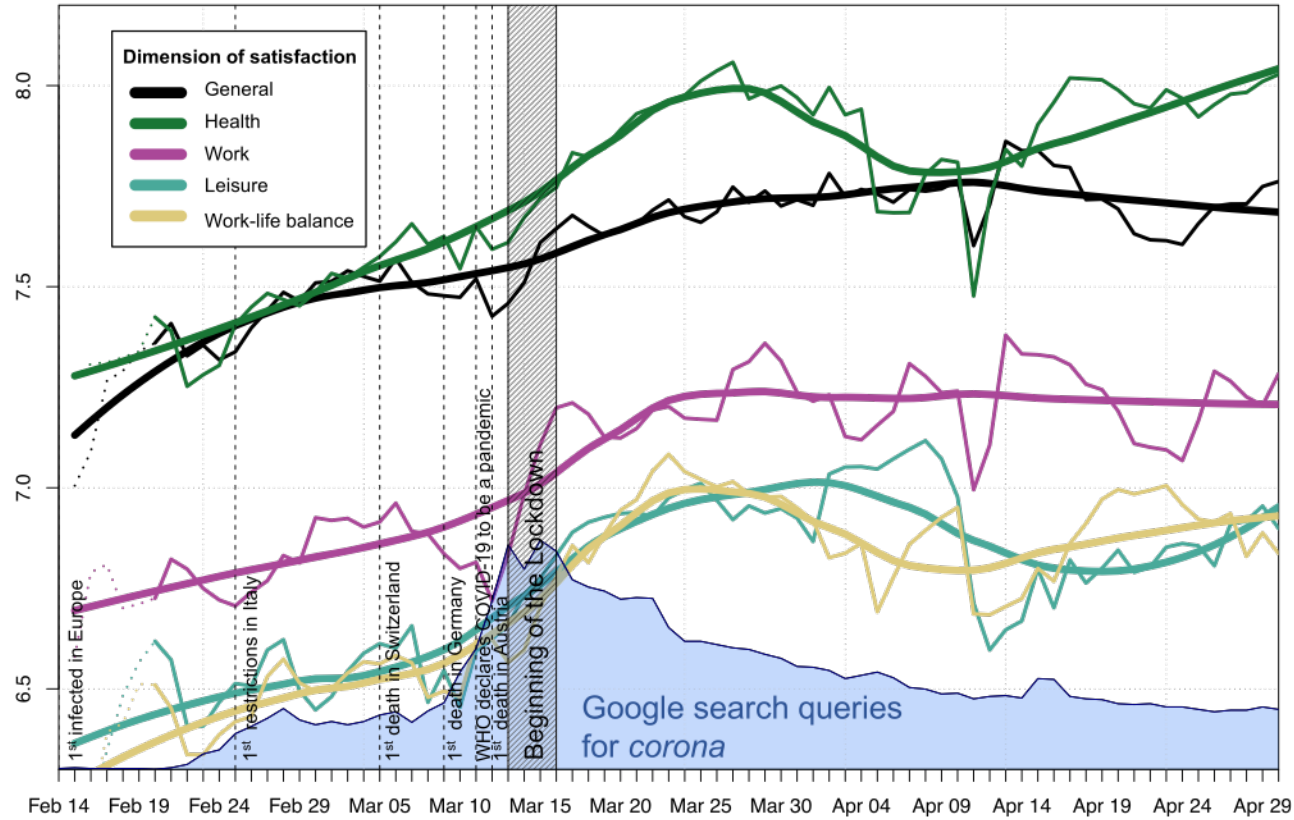
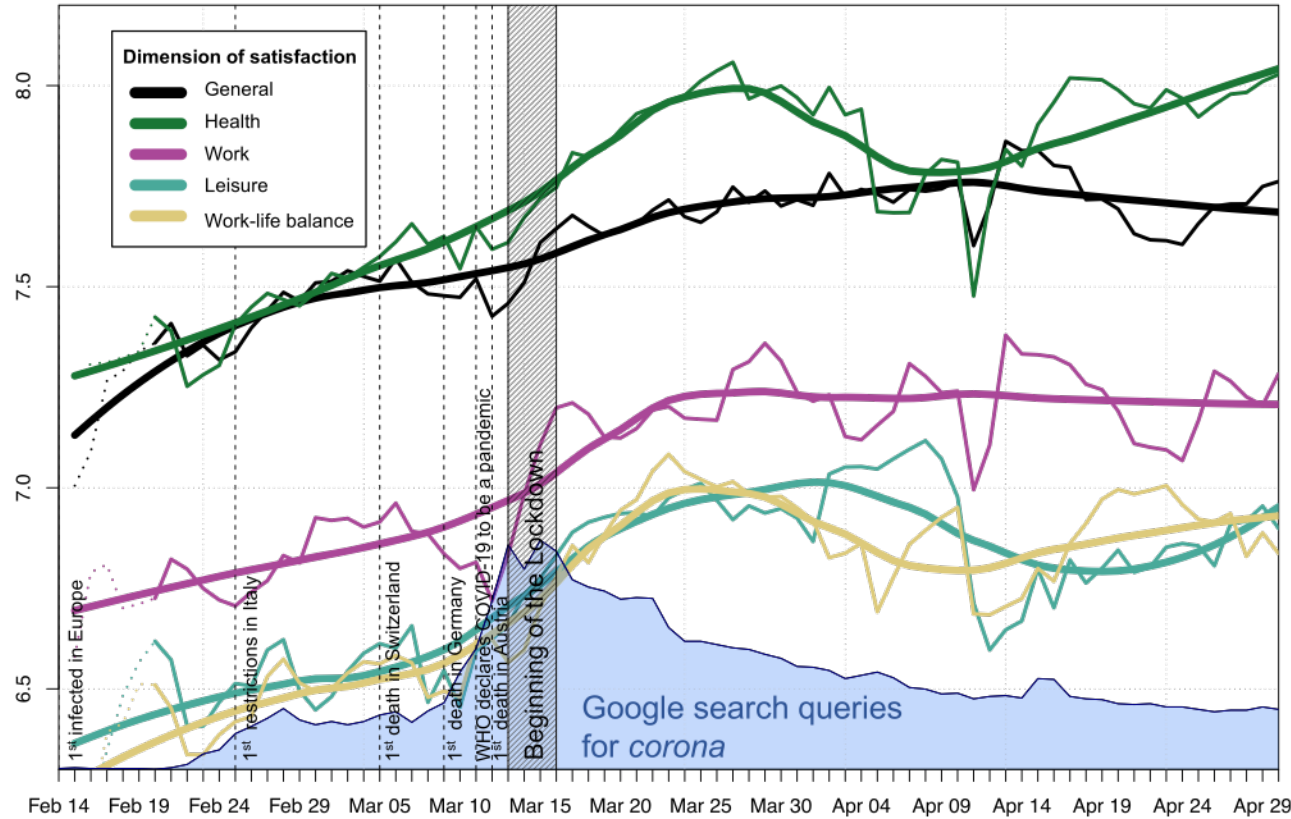


Fig. 2. Scientists' satisfaction over time.

Results



Naive t-test (ignoring sample differences) show significant differences!

e.g.: general life satisfaction
pre-lockdown: 7.48, lockdown: 7.67
 $t(12786) = 5.23, p < 0.001$

Fig. 2. Scientists' satisfaction over time.



Results

General life satisfaction

	All	With kid	Without kid	P
PhD Student	0.12***	0.10	0.12***	0.770
Post-Doc	0.08**	0.10*	0.07	0.635
Professor	0.19***	0.19**	0.17**	0.787
Other	0.14*	0.00	0.18*	0.285
All	0.09***	0.08*	0.10***	0.671

Satisfaction with work-life balance

	All	With kid	Without kid	P
PhD Student	0.17***	0.03	0.19***	0.068
Post-Doc	0.10***	0.03	0.15***	0.056
Professor	0.20***	0.12.	0.26***	0.107
Other	0.21**	-0.02	0.28***	0.068
All	0.15***	0.04	0.19***	<0.001

Note: *p<0.05; **p<0.01; ***p<0.001. Numeric values show Cohen's *d* effect size, which is the difference between the two groups means proportional to the pooled standard deviation. Stars indicate the statistical significance of the associated inferential t-test comparing the two means. P values indicate the statistical significance of the effects sizes' difference between researchers with and without kids using approximate permutation tests. The permutation test involved 10,000 repetitions in estimating each distribution of the effect size differences between researchers with and without kids.



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Multivariate regression models confirm these tendencies!

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Discussion

- Empirical evidence on how scientists' life satisfaction has been affected by the Covid-19 pandemic
- Did not **decrease** during the lockdown
- Slight increase on all measured dimensions (particularly health, work, and work-life balance)

Interpretation: Mainly due to shift towards home office

- Flexible work-life organisation
- Easier to find time for family, leisure activities
- Less travel, less commuting



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Because:

- Scientists are a relatively homogenous part of the population
- Less threatened by immediate job loss
- Workload remained relatively stable



And today – 18 months on?

- How are satisfaction levels of scientists today?
- Period effect? weather, cancellation of duties/travels/conferences etc. - now replaced by video conferences



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Thank you for your attention!