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UNIVERSITÄT
HEIDELBERG
ZUKUNFT
SEIT 1386

Female scholars in the pandemic: the need for sustainable career measures and improved selection procedures

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The precarious situation of female scholars during the Covid pandemic.



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General burdens

- 1. Homeschooling;
- 2. Laboratories closed;
- 3. Libraries closed;
- 4. International experience, required for professorships, possible only virtually;
- 5. Heavier teaching load and adaptation to online modalities.
- => Women are affected by a the heavier burden of homeschooling and on the average have larger teaching obligations.



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Picture:

<https://www.parents.com/kids/education/home-schooling/homeschooling-101-what-is-homeschooling/>

- In lockdown, mothers were able to do only a third of the uninterrupted paid-work hours of fathers
- (UK Fiscal Institute and UCL,
- 3,500 families)

Homeschooling





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Most exposed

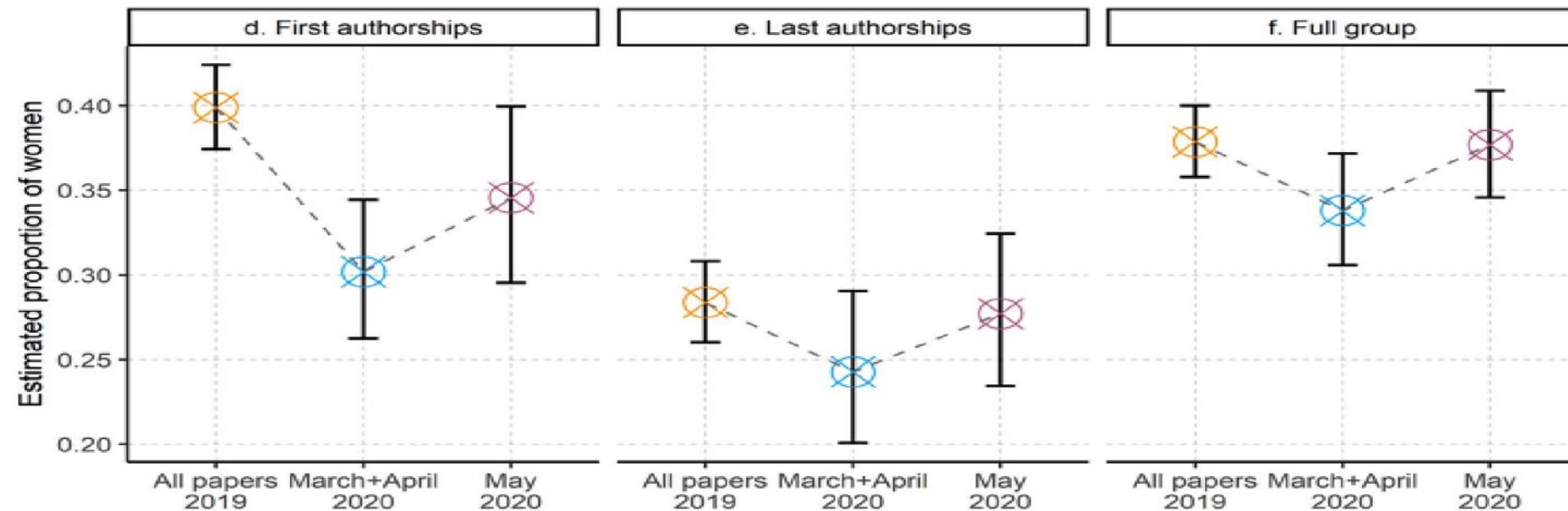
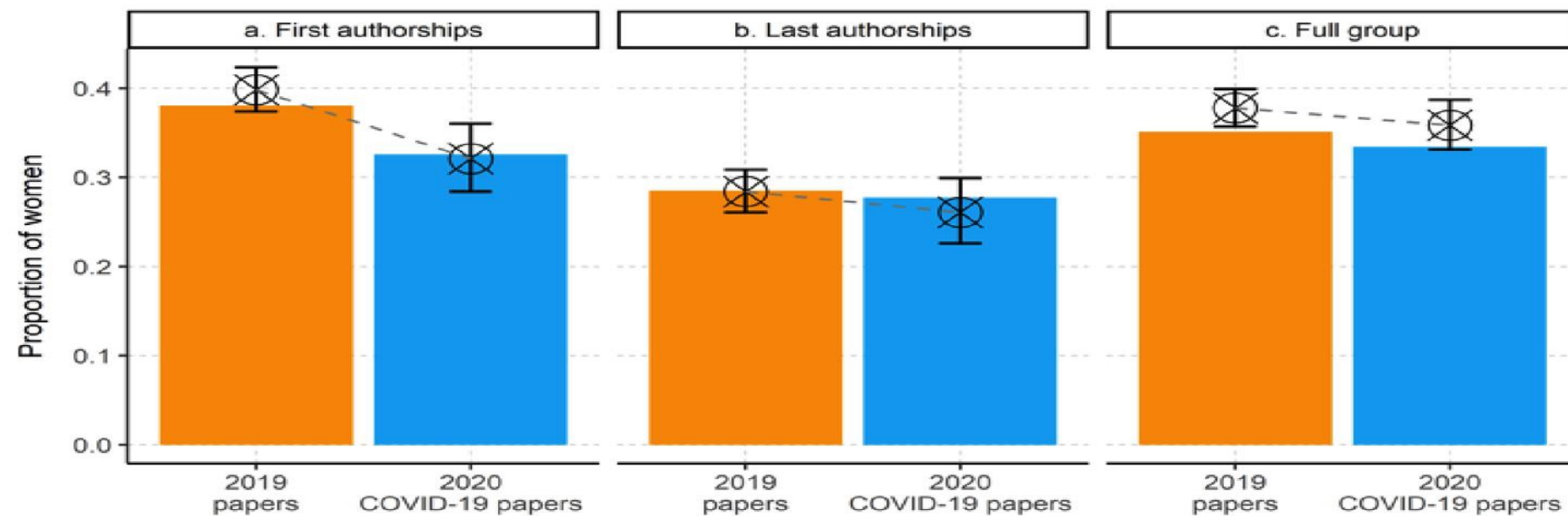
- Female scholars systematically have more precarious positions (Europe-wide 8,1% female, 5% male).
- => precarious positions are the first ones to be dismissed.
- Female medical doctors provide basic healthcare in at least 70% of medical occupations (but generally stagnate at 25% of senior leadership, cf. *Nature* **583**, 867-869, 2020).
- The Covid pandemic affected basic healthcare to the largest extent.



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Most effected

- Early-career researchers cannot perform the necessary empirical work.
- Early-career researchers cannot gather the required direct international experience.
- Early-career researchers have temporary research contracts.
- Parents of school-age children – mostly early career researchers.
- =>
- Less early-career publication submissions. Cf. Andersen et al. (2020), next slide, on paper submissions during the early Covid period.





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Concrete threats

- There is a global tendency to reduce programs to support research after parental leave (*Nature* **583**, 867-869 2020).
- Early-career researchers cannot gather the necessary empirical data and are losing at least a year of productivity.
- Lack of international mobility affects researchers outside of the leading universities most.
- => Early-career researchers have temporary positions, and extensions usually do not offer the full compensation for the lost time.
- => Temporary positions are usually the first ones to be dismissed.

The need to review career planning measures and selection procedures affecting women



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Female careers

- University careers must be planable:
 - - there must be minimum employment times (good practice: Germany, normally two years) for a basic specialization;
 - - there must be clear career goals, the duration of employment must be adequate for the career goal, and monitored during the employment time;
 - - there must be transparent requirements for each career stage;
 - - there must be transparent timescales and application deadlines
- Supervision and decision about appointment should not hinge on one person (advantages of matrix structures developed in industry).



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Female careers

- Universities and other research institutions are advised to monitor the gender division of the different career positions, and preferentially employ female scholars in permanent positions until the equilibrium has been reached;
- There should be research scholarships for female scholars after the pandemic, until the equilibrium has been reached;
- There should be search committees especially focused on the specific position of female scholars.



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Selection procedures

- Universities and other research institutions should have transparent criteria and processes for all the selection procedures.
- There should be training against bias for committee members as well as bias observers.
- Selection committees should evaluate the quality of the research output and relate publication quantity to the academic age, from which parental times, pandemic times and career breaks have been subtracted.
- Selection committees should evaluate the teaching quality and community service in addition to research.
- Participation in international networks should be valued as equal to physical mobility.



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Recommendations

- **Universities and other research institutions:**
 - - make careers planable, adjust employment times;
 - - eliminate underrepresentation of women in long-term and permanent positions;
 - - prioritize female scholars in selection processes during the immediate post-Covid period.
- **Publishers:**
 - Prioritise publishing research by female researchers.
- **Research funders:**
 - Enhance female applications (good practice: the Irish Research Council);
 - Prioritise funding projects with female key personnel up to an equilibrium during the immediate post-Covid period.



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References

- Andersen, J.P., M. Wullum Nielsen, N.L. Simone, R.E. Lewiss, R. Jagsi (2020) Covid-19 medical papers have fewer women first authors than expected. eLife 2020;9:e58807 DOI: [10.7554/ELIFE.58807](https://doi.org/10.7554/ELIFE.58807)