

List of Publications

Satu Helske – 4 March 2026

Publications marked with an asterisk ()* originate from research projects funded through my proposals and were authored by the research team under my supervision. *Publications marked with a hashtag (#)* are PhD researchers' publications under my supervision.

A Peer-reviewed scientific articles and book chapters

1. * Chapman, S. N., Kotimäki, S., Helske, S., & Hägglund, A. E. (2026). Support or suppress: Father's parental leave uptake in the workplace context in Finland. *Journal of Social Policy*. Advance online publication. doi:[10.1017/S0047279426101287](https://doi.org/10.1017/S0047279426101287)
2. Bedük, S., Fasang, A. E., Harkness, S., Andrade, S. B., Büyükkeçeci, Z., Karhula, A., & Helske, S. (2025). Insurance against risk? Economic cost and compensation of job loss in different welfare states. *Socio-Economic Review*. Advance online publication. doi:[10.1093/ser/mwaf066](https://doi.org/10.1093/ser/mwaf066)
3. * Pasanen, T., Helske, S., Giuliani, G. A., Chapman, S. N., & Helske, J. (2025). Adaptation to paternal leave policies in Finnish municipalities: changing gender norms and cross-border policy legacies. *European Societies*. Advance online publication. doi:[10.1162/euso.a.43](https://doi.org/10.1162/euso.a.43)
4. Helske, S. & Kawalerowicz, J. (2024). Citizens' candidates? Labour market experiences and radical right-wing candidates in the 2014 Swedish municipal elections. *Acta Politica* 59, 694–717. doi:[10.1057/s41269-023-00304-8](https://doi.org/10.1057/s41269-023-00304-8)
5. Helske, S., Helske, J., & Chihaya, G. K. (2024). From sequences to variables – Rethinking the relationship between sequences and outcomes. *Sociological Methodology*, 54(1), 27-51. doi:[10.1177/00811750231177026](https://doi.org/10.1177/00811750231177026)
6. Saqr, M., López-Pernas, S., Helske, S., Durand, M., Studer, M., & Ritschard, G. (2024) Sequence Analysis in Education: Principles, Technique, and Tutorial with R. in Saqr, M. & López-Pernas, S. (Eds.) *Learning analytics methods and tutorials*. Springer. doi:[10.1007/978-3-031-54464-4_10](https://doi.org/10.1007/978-3-031-54464-4_10)
7. Helske, J., Helske, S., Saqr, M., López-Pernas, S., & Murphy, K. (2024) A modern approach to transition analysis and process mining with Markov models: A tutorial with R. in Saqr, M. & López-Pernas, S. (Eds.) *Learning analytics methods and tutorials*. Springer. doi:[10.1007/978-3-031-54464-4_12](https://doi.org/10.1007/978-3-031-54464-4_12)
8. López-Pernas, S., Saqr, M., Helske, S., & Murphy, K. (2024) Multi-channel sequence analysis in educational research: An introduction and tutorial with R. in Saqr, M. & López-Pernas, S. (Eds.) *Learning analytics methods and tutorials*. Springer. doi:[10.1007/978-3-031-54464-4_13](https://doi.org/10.1007/978-3-031-54464-4_13)
9. Saqr, M., López-Pernas, S., Helske, S., & Hrastinski, S. (2023). The longitudinal association between engagement and achievement varies by time, students' subgroups, and achievement state: A full program study. *Computers & Education*, 199. doi:[10.1016/j.compedu.2023.104787](https://doi.org/10.1016/j.compedu.2023.104787)
10. Helske, S., Keski-Säntti, M., Kivelä, J., Juutinen, A., Käariälä, A., Gissler, M., Merikukka, M., & Lallukka, T. (2023). Predicting the stability of early employment with its timing and childhood social and health-related predictors: a mixture Markov model approach. *Longitudinal and Life Course Studies*, 14(1). doi:[10.1332/175795921X16609201864155](https://doi.org/10.1332/175795921X16609201864155)
11. Liao, T. F., Bolano, D., Brzinsky-Fay, C., Cornwell, B., Fasang, A. E., Helske, S., ... & Studer, M. (2022). Sequence analysis: Its past, present, and future. *Social Science Research*, 107, 102772. doi:[10.1016/j.ssresearch.2022.102772](https://doi.org/10.1016/j.ssresearch.2022.102772)

12. Helske, J., Helske, S., Cooper, M., Ynnerman, A., & Besancon, L. (2021). Can visualization alleviate dichotomous thinking – Effects of visual representations on the cliff effect. *IEEE Transactions on Visualization and Computer Graphics*, 27(8). doi:[10.1109/TVCG.2021.3073466](https://doi.org/10.1109/TVCG.2021.3073466)
13. Breen, R., Ermisch, J., and Helske, S. (2019) Educational reproduction in Europe: A descriptive account. *Demographic Research*, 41(49), 1373–1400. doi:[10.4054/DemRes.2019.41.49](https://doi.org/10.4054/DemRes.2019.41.49)
14. Helske, S. and Helske, J. (2019) Mixture hidden Markov models for sequence data: the seqHMM package in R. *Journal of Statistical Software*, 88(3), 1–32. doi:[10.18637/jss.v088.i03](https://doi.org/10.18637/jss.v088.i03)
15. Helske, S., Helske, J. and Eerola, M. (2018) Combining Sequence Analysis and Hidden Markov Models in the Analysis of Complex Life Sequence Data. In G. Ritschard & M. Studer (eds), *Sequence Analysis and Related Methods: Innovative Methods and Applications*. Springer. doi:[10.1007/978-3-319-95420-2_11](https://doi.org/10.1007/978-3-319-95420-2_11)
16. Eerola, M. and Helske, S. (2016) Statistical analysis of life history calendar data. *Statistical Methods in Medical Research*. 25(2), 571–597. doi:[10.1177/0962280212461205](https://doi.org/10.1177/0962280212461205)
17. Helske, S., Steele, F., Kokko, K., Räikkönen E., and Eerola, M. (2015) Partnership formation and dissolution over the life course: an illustration of the application of sequence analysis and event history analysis in the study of recurrent events. *Longitudinal and Life Course Studies*. 6(1), 1–25. doi:[10.14301/llcs.v6i1.290](https://doi.org/10.14301/llcs.v6i1.290)
18. Helske, S. (2011) Ylioppilaskirjoitusten äidinkielen kokeiden tehtävänantojen ja tulosten tilastoanalyysi [Statistical analysis of assignments and grades of the written matriculation examination]. In A. Kauppinen, H. Lehti-Eklund, H. Makkonen-Graig & R. Juvonen (Eds.) *Lukiolaisten äidinkieli. Suomen suomenkielisten ja ruotsinkielisten lukioiden opiskelijoiden äidinkielen taidot ja niiden arviointi [Assessing language and literacy skills among Finnish- and Swedish-speaking high school students in Finland]*. Helsinki, Finland: Suomalaisen kirjallisuuden seura. (In Finnish.)

B Non-refereed scientific articles

19. # Akter, S., Chapman, S. N., Helske, S., Salin, M., & Schwanitz, K. (2026). Heterogeneous Effects of Parental Leave Reform on Partnership Stability: Examining the Role of Parental Education. *INVEST Working Papers 148/2026*. doi:[10.31235/osf.io/xkcy8_v2](https://doi.org/10.31235/osf.io/xkcy8_v2) (under review in European Sociological Review)
20. * Helske, S., Helske, J., Chapman, S. N., Kotimäki, S., Salin, M., & Tikka, S. (2025). Heterogeneous workplace peer effects in fathers' parental leave uptake in Finland. *INVEST Working Papers 96/2024*. doi:[10.31235/osf.io/p3chf](https://doi.org/10.31235/osf.io/p3chf) (under review in European Sociological Review)
21. * Kotimäki, S., Chapman, S., Helske, S., & Salin, M. (2025). Yrittäjäisien perhevapaat Suomessa [Parental leave uptake among entrepreneur fathers in Finland]. *INVEST Working Papers 124/2025*. doi:[10.31235/osf.io/yqdvx_v1](https://doi.org/10.31235/osf.io/yqdvx_v1) (under review in Yhteiskuntapolitiikka)
22. Helske, S., Erola, J., & Helske, J. (2024). Education, family complexity and heterogeneous causal effects of parental separation. *INVEST Working Papers 104/2024*. doi:[10.31235/osf.io/4dk3w](https://doi.org/10.31235/osf.io/4dk3w)
23. Andrade, S. B., Fasang, A. E., Helske, S., & Karhula, A. (2023). Typologies in Sequence Analysis: Practical Guidelines for Identifying Robust Cluster Solutions. SocArXiv preprint. doi:[10.31235/osf.io/kj8d5](https://doi.org/10.31235/osf.io/kj8d5)
24. Chapman, S.N., Kotimäki, S., & Helske, S. (2022). Meso-level contextual patterns of fathers' family leave uptake in Finland. *INVEST Working Papers 59/2022*. doi:[10.31235/osf.io/xn6pg](https://doi.org/10.31235/osf.io/xn6pg)

25. Helske, S, Ylöstalo, H., & Koskinen, H. (2021). Samassa myrskyssä mutta eri veneissä: COVID-19 ja eriarvoisuus. [Same storm but different boats: COVID-19 and inequality.] *Yhteiskuntapolitiikka*, 5–6/2021. (In Finnish). url:urn.fi/URN:NBN:fi-fe2021112456870
26. Eerola, M. and Helske, S. (2018) Analysis of Life History Calendar Data. In N. Balakrishnan, T. Colton, B. Everitt, W. Piegorisch, F. Ruggeri and J. L. Teugels (eds) *Wiley StatsRef: Statistics Reference Online*. doi:[10.1002/9781118445112.stat08005](https://doi.org/10.1002/9781118445112.stat08005)
27. Helske, S., Helske, J. and Eerola, M. (2016) Analysing Complex Life Sequence Data with Hidden Markov Modelling. In Gilbert Ritschard and Matthias Studer (eds.) *LaCOSA II: Proceedings of the International Conference on Sequence Analysis and Related Methods*. LIVES-Swiss National Centre of Competence in Research; Swiss National Science Foundation; Université de Genève.

D Publications intended for professional communities

28. Vogt, H., Oksanen, L.-M., Pettersson, J. et al. (2026). Koronapandemian hallinta ja saadut opit Suomessa [Pandemic Governance in Finland and Lessons Learnt]. Publications of the Government's analysis, assessment and research activities 2026:2. Available at <https://urn.fi/URN:ISBN:978-952-287-974-5>
29. Helske, S., Jalovaara, M., Lammi-Taskula, J., Miettinen, A., Nisén, J., & Österbacka, E. (2025). *A well-functioning parental leave system supports well-being as well as the social and economic sustainability of the society*. FLUX Policy Brief 3/2025. Available at <https://fluxconsortium.fi/a-well-functioning-parental-leave-system-supports-well-being-as-well-as-the-social-and-economic-sustainability-of-the-society/>
30. Helske, S., Koskinen, H. & Ylöstalo, H. (2022). Eriarvoistuminen voi jatkua pitkään koronapandemian jälkeen [Inequality may worsen long after the COVID-19 pandemic]. Published in COVID-19 -kriisin yhteiskunnalliset vaikutukset Suomessa: Keskipitkän aikavälin arvioita [Societal impacts of COVID-19 in Finland: medium-term estimates]. Valtioneuvoston julkaisuja 2022:14. Available at <http://urn.fi/URN:ISBN:978-952-383-708-9>
31. Jalovaara M., Lilja E., Nisén J., et al (2022). Muuttuva perheenmuodostus – Syyt, seuraukset ja mahdolliset tulevaisuudet (FLUX). Suomen akatemia, Strategisen tutkimuksen neuvosto. Available at <https://research.utu.fi/converis/portal/detail/Publication/68703669>
32. – 58. Helske, S., Koskinen, H. & Ylöstalo, H. (2020–2022). Eriarvoisuus (ml. työllisyys). COVID-19-tutkimuskatsaus 1/2020–5/2022 [Inequality. COVID-19 research review 1/2020–5/2022]. Prime minister's office. Available at tietokayttoon.fi/covid-19-tutkimuskatsaukset
– 26 literature reviews on the latest COVID-19 related inequality research for Finnish decision-makers
59. Helske, S. (2017). Visualization tools in the seqHMM package. Available at cran.r-project.org/web/packages/seqHMM/vignettes/seqHMM_visualization.pdf
60. Helske, S. (2017). Examples and tips for estimating Markovian models with seqHMM. Available at cran.r-project.org/web/packages/seqHMM/vignettes/seqHMM_estimation.pdf

E Publications intended for the general public

61. Helske, S. & Hägglund, A.E. (2024). Isät vapaalla – Miten työympäristö näkyy isien perhevapaiden käytössä ja myöhemässä palkkakehityksessä? INVEST Blog. Available at <https://blogit.utu.fi/invest/2024/11/10/isat-vapaalla-miten-tyoymparisto-nakyy-isien-perhevapaiden-kaytossa-ja-myohemmassa-palkkakehityksessa/>

62. Salonen, L, Prix, I. & Helske, S. (2022). Kommentti: Tilastollisen merkitsevyyden korostaminen johtaa helposti vääriin johtopäätöksiin. Ilmiö – sosiologinen media kaikille.
<https://ilmiomedial.fi/artikkelit/kommentti-tilastollisen-merkitsevyyden-korostaminen-johtaa-helposti-vaariin-johtopaatoksiin/>
63. Kotimäki S., Chapman S., & Helske S. (2022) Fathers on family leaves: Who, when, and why? INVEST blog. Available in English at blogit.utu.fi/invest/2021/11/11/fathers-on-family-leaves-who-when-and-why/ and in Finnish at blogit.utu.fi/invest/2021/11/11/isat-perhevapailla-kukamiksi-milloin/
64. Helske, S. & Ylöstalo H. (2021) Samassa myrskyssä mutta eri veneissä – koronapandemia ja eriarvoisuus. INVEST blog. Available at blogit.utu.fi/invest/2021/04/21/samassa-myrskyssa-mutta-eri-veneissa-koronapandemia-ja-eriarvoisuus
65. Helske, S. (2020). Uskaltaako läheisiä tavata, jos kaikilla on negatiivinen tulos koronatestistä? INVEST blog. Available at blogit.utu.fi/invest/2020/12/17/uskaltaako-laheisia-tavata-jos-kaikilla-on-negatiivinen-tulos-koronatestista/

G Theses

66. Helske, S. (2016) *Statistical analysis of life sequence data*. Department of Mathematics and Statistics, University of Jyväskylä / Report 157. Jyväskylä, Finland: University Printing House. ISBN 978-951-39-6758-1. (PhD thesis)

I ICT software

67. Helske, S., Tikka, S., Chapman, S., Pasonen, T.-M. (2024) Parental leaves in Finland. App for visualizing parental leave statistics in Finnish municipalities across time. Available at <https://satuhelske.shinyapps.io/finleave>
68. Helske, S. (2020). COVIDparty App: calculating the risk of COVID-19 exposure among a group of test-negative people (intended for teaching basic probability theory). Available at https://satuhelske.shinyapps.io/COVID19_app/
69. Helske, J. and Helske, S. (2018) *Mixture hidden Markov models for sequence data: the seqHMM package in R*. R package version 1.0.10.
<https://cran.r-project.org/web/packages/seqHMM/index.html>