

# Cormac Monaghan

PhD RESEARCHER · DATA SCIENTIST

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## Profile

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Data science PhD researcher at Maynooth University funded by Research Ireland. Focusing on applying advanced statistical analysis and causal inference techniques to the study of procrastination, particularly within older adult populations.

## Experience

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### Data Scientist

May 2025 - Present

University of Limerick

- Building a data processing pipeline to tidy and manage continuously updated ISCycle data.

### Teaching Assistant

Sept 2023 - Present

Maynooth University

- Providing teaching support in advanced statistical methods to undergraduate and postgraduate students.
- Providing teaching and lecturing support in statistical theory and linear algebra to undergraduate students.

### Quantitative Risk Analyst

June 2023 - Aug 2023

Grant Thornton

- Designed and implemented a decision making toolkit for binary classification problems in R Shiny.
- Aided in research on the use of AI and machine learning in the financial sector.

### Research Intern

Feb 2021 - May 2021

Connolly Counselling Centre

- Carried out several literature reviews surrounding mental health and treatment.
- Designed various infographic leaflets for distribution to center's staff and clients.

### Research Intern

Oct 2020 - Dec 2020

Maynooth University

- Conducted a literature review on the brain regions associated with autobiographical memory.
- Responsible for designing an interactive statistical decision tree.
- Carried out a qualitative analysis of audio transcripts on autobiographical reminiscence in older adults.

## Education

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### Ph.D. Data Science

Sept 2022 - Present

Hamilton Institute, Maynooth University

- Focused on the application of advanced statistical methods to study procrastination in aging populations.
- Developed an R package for cognitive function classification using Health and Retirement Study data.
- Disseminated research in various journals and international conferences.

### BSc. Psychology

Sep 2018 - May 2022

Department of Psychology, Maynooth University

- Final Grade: 72%.
- Ranked 4th out of a class of 21.
- Thesis Title: Academic Procrastination and Perfectionism – The Mediating Role of Temporal Thought.

# Publications

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## JOURNAL ARTICLES

- **Monaghan, C.**, de Andrade Moral, R., Kelly, M., & McHugh Power, J. (2026). Procrastination as a Marker of Cognitive Decline: Evidence from Longitudinal Transitions in the Older Adult Population. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*, 18(1), e70245. 10.1002/dad2.70245
- McHugh Power, J., Homeniuk, R., **Monaghan, C.**, Bantry-White, E., & O'Reilly, A. (2025). Loneliness Research in Ireland: What Should we Prioritise? *ALONE*
- **Monaghan, C.**, de Andrade Moral, R., & McHugh Power, J. (2025). Procrastination and preventive health-care in the older U.S. population. *Preventive Medicine*. 108185. 10.1016/j.ypmed.2024.108185
- **Monaghan, C.**, Avila-Palencia, I., Han, S. D., & McHugh Power, J. (2024). Procrastination, depressive symptomatology, and loneliness in later life. *Aging & Mental Health*, 1-8. 10.1080/13607863.2024.2345781
- Allen, A. P., Doyle, C., Doyle, C. M., **Monaghan, C.**, Fitzpatrick, N., & Roche, R. A. (2021). What we talk about when we talk about the past: Discursive psychological analysis of autobiographical reminiscence in older Irish adults. *Psychobiographical illustrations on meaning and identity in sociocultural contexts*, 327-344. 10.1007/978-3-030-81238-6\_15

## CONFERENCE PROCEEDINGS

- **Monaghan, C.**, de Andrade Moral, R., & McHugh Power, J. (2025). The Statistical Power of Alcohol Consumption Measures [Poster Session]. 45th Conference on Applied Statistics in Ireland. Galway, Ireland.
- **Monaghan, C.**, de Andrade Moral, R., & McHugh Power, J. (2024). Modelling the Non-linear Associations between Age and Health: Implications for Care, *Age and Ageing*, Volume 53, Issue Supplement\_4. 10.1093/ageing/afae178.084
- **Monaghan, C.**, & Moral, R. A., & Power, J. M. (2024). The health risks of procrastination in older adult populations. [Poster Presentation]. European Health Psychology Society 38th Annual Conference, Cascais, Portugal.
- **Monaghan, C.**, & Power, J. M. (2023). Age, procrastination, depressive symptomatology, and loneliness: a structural equation modelling approach. *Age and Ageing*, 52(Supplement\_3), 10.1093/ageing/afad156.066
- **Monaghan, C.** (2021). Academic procrastination and perfectionism - the mediating role of temporal thought. [Poster Presentation]. Annual Student Psychology Conference 2022. Waterford Institute of Technology, Ireland. 10.13140/RG.2.2.19926.3232

## R AND QUARTO PACKAGES

- **Monaghan, C.** (2025). *Shifu - academic templates for Quarto written in Typst*. <https://github.com/C-Monaghan/shifu-academic-quarto>
- **Monaghan, C.**, de Andrade Moral, R., & McHugh Power, J. (2024). *lwc2022: Langa-Weir Classification of Cognitive Function for 2022 HRS Data*. R package version 1.0.0. <https://github.com/C-Monaghan/lwc2022>

# Skills

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## Data Analysis

Data wrangling; Data visualisation; Statistical modelling; Time series; Mixed models; Structural equation modelling; Meta analysis

## Programming Languages

R; R Shiny;

## Markup Languages

Markdown; Quarto; LaTeX; Typst;