



**DEMENTIA RESEARCH  
NETWORK IRELAND**

Prevention, Cure & Care for  
Neurodegenerative Diseases

## Researcher In Focus Series – July 2021

This month's Researcher in Focus is Rory Boyle, who is a Postdoctoral Researcher in the Whelan Lab in Trinity College Dublin.



### **What is your area of research?**

My research is focused on brain ageing and cognitive decline. I am particularly interested in the concept of cognitive reserve which explains why some people have normal levels of cognitive function despite significant brain ageing or neurodegenerative changes. My research to-date has focused on developing methods for accurately measuring cognitive reserve using neuroimaging. I hope to apply these methods so that we can identify both the brain networks that might underlie cognitive reserve and the life experiences and lifestyle factors that may build cognitive reserve. I also hope to use these methods to investigate whether sex differences in cognitive reserve may explain sex differences in cognitive decline and dementia.

### **What sparked your interest in this area?**

I have always had a really strong interest in the brain and how it works and during my undergraduate I had the opportunity to study neuroscience and cognitive psychology. I suppose more relevantly, a lot of us have a family member or friend whose life has been impacted by dementia so I was really interested in finding out why some people develop dementia and why other people don't and if there might be ways to prevent, or slow the course, of dementia. When I started in the Whelan Lab, I then had the opportunity to listen to talks from Prof. Ian Robertson and Prof. Yaakov Stern on the topic of cognitive reserve, which sparked my interest in this specific topic.



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**What stage are you at in your career and are there any achievements you are particularly proud of?**

I completed my PhD earlier this year and have started working as a postdoctoral researcher on a research project which aims to refine the way in which we validate potential neuroimaging measures of cognitive reserve. I am particularly proud of having led research collaborations during my PhD which included research groups from The Irish Longitudinal Study on Ageing (TILDA), Columbia University in New York, and Dokuz Eylül University in Turkey.

**What impact would you like your research to have?**

I hope that at some point my research will have a positive impact on people living with dementia and people at risk of cognitive decline. Specifically, I hope to try and improve the early detection of dementia and to help to identify effective interventions for preventing or slowing the course of dementia and cognitive decline.

**Who has helped or inspired you in your area of research?**

I am very grateful to my PhD supervisor, Prof. Rob Whelan, who gave me the opportunity to pursue a PhD and a career in research, for his support and guidance throughout the PhD. I have been lucky enough to attend talks given by people living with dementia and other neurodegenerative diseases and have found these very inspiring for many reasons one of which is their commitment to engaging in research and advocacy in order to improve the outlook for others.

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