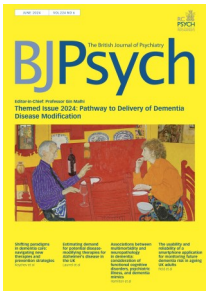
BDR NEWS

Brains for Dementia Research

Brains for Dementia Research Newsletter winter 2024

Major study involving BDR data and tissue is debated at the Royal College of Psychiatrists Journal Club



In April of this year, a study using exclusively BDR data, was published in the British Journal of Psychiatry DOI: https://doi.org/10.1192/bjp.2024.25

The study title, "Associations between multimorbidity and neuropathology in dementia: consideration of functional cognitive disorders, psychiatric illness and dementia mimics" used the clinical assessment and post-mortem data from 767 BDR participants.

The research was designed to investigate whether the presence of certain health conditions listed in the table below, pose a risk factor for dementia. In particular, the researchers wanted to find out whether having multiple health conditions (multimorbidity) in later life is associated with more severe, dementia-related brain changes (neuropathology) at autopsy.

	No dementia ($n = 328$)	Dementia ($n = 439$)
Primary physical conditions, *n* (%)		
Myocardial infarction	43 (13)	55 (13)
Congestive heart failure	16 (4.9)	6 (1.4)
Peripheral vascular disease	19 (5.8)	9 (2.1)
Chronic pulmonary disease	30 (9.1)	27 (6.2)
Rheumatic disease	18 (5.5)	8 (1.8)
Peptic ulcer disease	6 (1.8)	9 (2.1)
Mild liver disease	4 (1.2)	1 (0.2)
Diabetes	43 (13)	55 (13)
Diabetes with complications	3 (0.9)	1 (0.2)
Hemiplegia	2 (0.6)	3 (0.7)
Renal disease	13 (4.0)	14 (3.2)
Cancer	138 (42)	123 (28)
Metastatic cancer	8 (2.4)	4 (0.9)
Secondary dementia-related conditions, *n* (%)		
Parkinson's disease	10 (3.1)	28 (6.5)
Cerebrovascular disease	52 (16)	53 (12)
Depression	13 (4.0)	31 (7.2)
Other mental disorder[a]	5 (1.5)	15 (3.5)

Results: Contrary to previous research findings, the BDR data used in this study showed that **physical multi-morbidity** was **not** associated with greater dementia-related neuropathological changes. Instead, the presence of "physical" multimorbidity, was in fact associated with less Alzheimer's disease pathology. Conditions which may be considered as clinical or early stage (prodromal) signs of dementia-related brain pathologies, such as Parkinson's disease, cerebrovascular disease, depression and other psychiatric conditions, **were however associated with dementia and neurological damage**.

Conclusions: The results highlight the importance of clearly defining what we mean when looking at multi-morbidity. Having physical health conditions alone is not associated with greater dementia-related neuro-pathological change. Separating physical conditions from other dementia-related diseases is therefore important when assessing dementia risk.

What Progress have we made in 2024?

Join the team at Alzheimer's Research UK for a discussion reflecting back on the big dementia news stories of the year.

Date: Tuesday 17th December 2024
Time: 1:00 -1:45 p.m. GMT
Location: Online (Zoom webinar)

The event includes presentations from three speakers; Professor Vanessa Raymont, Principal Investigator at the BDR Centre in Oxford, David Thomas Head of Policy at ARUK and Jordan Adams, one half of the "FTD Brothers"

You can register to attend this event using the link: Registration

What's happening in your local BDR?

Brains for Dementia Research

Newcastle University
UK | Malaysia | Singapore

Unsung heroes - the mortuary staff

The BDR team in Newcastle wanted to give a special mention to the unsung heroes of brain tissue donation without whom we would not be able to carry out this important work: the hospital mortuary staff.

Mortuary staff play such a vital role. Without their support, the brain donations could not go ahead and in the majority of cases, this work is carried out free of charge, a gesture of good will to support future research. We could not function without this support and the BDR assessment teams wanted to raise awareness of this critically important partnership. In particular, the team in Newcastle wanted to give special praise to the staff based at North Tyneside General Hospital with senior nurse Michelle Widdrington commenting that "the staff really do go above and beyond expectations. They are incredibly generous and helpful and never let us down even when we know they are very busy". We would like to express our thanks to all staff working in mortuaries and supporting BDR. Without question, they represent the unsung heroes of dementia research.

Alzheimer's Society make a major investment in the support of early career dementia researchers

Alzheimer's Society

The two main UK dementia charities, Alzheimer's Society and Alzheimer's Research UK, fund the BDR programme. Recently, the Alzheimer's Society announced a £9 million investment to champion the next generation of dementia researchers. The investment is to be used to establish new Doctoral Training Centres (DTC) to support and nurture dementia researchers at the start of their careers. Doctoral Training Centres are to be established at Queen Mary's London University, at the University of Manchester, and at Newcastle University. BDR was set up to support such early career researchers by providing them with serial assessment data and associated tissue, and we hope that through initiatives such as the DTC there will be increased demand for these incredibly valuable resources. If you want to learn more about this initiative, please go to the Alzheimer's Society website:

https://www.alzheimers.org.uk/research/our-research/alzheimers-society-doctoral-training-centres

Our next, **online Engagement Event**, hosted by the BDR team from King's College, London is due to take place on **Wednesday 9th April 2025, from 2:00 pm**

KING'S College LONDON

Details about the event program, as well as how to join, will be emailed to BDR participants and study partners in due course. The events are intended to provide an opportunity to involve participants and their friends and family members, to cover topics relevant to the study of dementia. We aim to make these events engaging and accessible and are always interested in the views and opinions of you, our supporters. You can contact us to share your ideas as to which topics you would like to see covered and give any feedback, by either emailing BDR.coordinatingcentre@ncl.ac.uk or by clicking on the form https://forms.office.com/e/QxgAedxhFq

We can't guarantee that we will be able to cover all the topics suggested, but we would certainly do our best to include them where possible.

AD/PD™ 2025
ADVANCES IN SCIENCE & THERAPY

The value of BDR to dementia research cannot be understated and we are keen to spread the word internationally. To support this initiative, we have registered to attend the upcoming AD/PD Conference in 2025 which will take place in Vienna. Through conference attendance we are able to reach out directly to researchers who may be unaware of what we have to offer and hence increase research collaborations and the use of BDR resources.

We would like to send Season's Greetings to our participants, study partners, friends and family members, and wish you all the very best for 2025