Final Report

Depression in People with Dementia and their Carers

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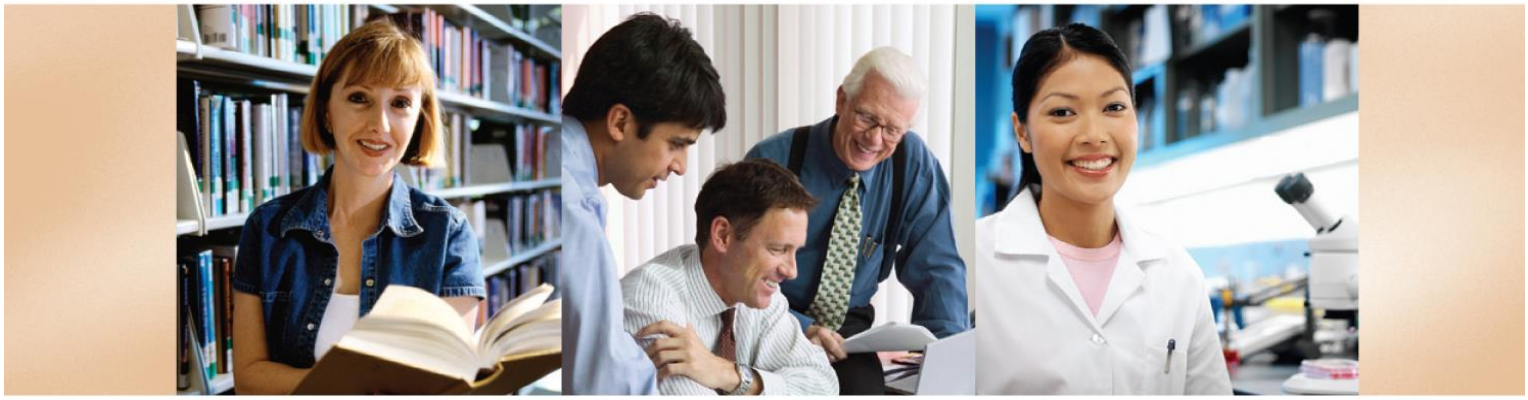

Dementia Collaborative Research Centres

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Translating dementia research into practice

Introduction

Dementia is a major public health concern of the 21st century and a leading cause of disability in people over the age of 65 (Ferri et al., 2005). Alzheimer's disease (AD) is the most common cause of dementia and depressive symptoms are frequently comorbid with this (Steinberg et al., 2008). Caring for someone with dementia can be challenging and depressive symptoms in caregivers are not an uncommon occurrence. The treatment of depression in Alzheimer's disease is not straight forward and antidepressant medications do not appear to be as effective as in cognitively intact populations (Banerjee et al., 2011). Alternative strategies are therefore paramount but these need to be informed by clear, evidence-based principles and well conducted randomised, controlled trials. Cognitive bias modification (CBM) targets attentional and interpretative biases associated with anxiety and depression. This has been shown to be effective in reducing depressive symptoms in younger adults without cognitive impairment but studies in populations with cognitive impairment and their carers are lacking. Our current pilot data has indicated that the intervention is feasible and well tolerated. In addition, CBM is safe and unlikely to be associated with significant adverse effects that are frequently problematic in vulnerable, ageing populations.

This project has three over-arching aims. To determine:

1. The effect of CBM in reducing the severity of depressive symptoms in AD
2. The effect of CBM in improving mood in carers of people with AD
3. The effect of CBM on quality of life of people (QOL) with AD and their carers

We hypothesise that adults with AD and their carers who are randomly allocated to active CBM will have less depressive symptoms after 12 weeks treatment than those receiving control CBM. We additionally hypothesise that CBM will be associated with improved QOL in adults with AD and reduced care burden in their carers as compared to control CBM after 3 and 6 months.

Research Method

With the assistance of DCRC funding, we have commenced recruitment to a 2x2, 26-week, double blind, controlled trial of CBM in people with moderate severity AD and those who care for them. Recruitment is ongoing in Perth (University of Western Australia) and Melbourne (University of Melbourne). Recruitment at Monash University has not yet commenced but this will start as soon as final ethics approvals are through. The trial aims to recruit 132 dyads overall (33 per cell) and randomise them according to the diagram below:

Group 1 **Patient and Carer active CBM (n=33 pairs)**	**Group 2** **Patient active CBM, Carer control CBM (n=33 pairs)**
Group 3 **Patient control CBM, Carer active CBM (n=33 pairs)**	**Group 4** **Patient and Carer control CBM (n=33 pairs)**

Research Outcomes/Results

We have recruited 5 dyads to date in Melbourne and Perth and these participants are completing the study procedures as planned. This is clearly behind our original timelines and targets but a number of unforseen issues have unfortunately contributed to this:

- Delay in ethics approvals in both Perth and Melbourne. In Perth, we obtained final ethics approval in August but this was only granted at the University of Melbourne site on the 2nd of November and is still pending at Monash.
- Delays due to Christmas break and periods of leave.
- Recruitment has been more challenging than anticipated. In Perth, we screened all patients of the Royal Perth, St John of God and Bentley Hospitals (around 2-3 thousand cases) and have mailed out 160 invitations to potentially eligible participants and their carers. We have received just 25 replies and managed to assess 5 couples in person. All met inclusion criteria and 2

couples have enrolled in the program. The situation has been similar in Melbourne. The main reasons behind this relatively poor response fraction are likely to be the inherent difficulties of recruiting participants in this area and the requirement for multiple visits to the research offices. We have considered offering a domiciliary service (i.e. home assessments) but this would be logistically difficult. An alternative approach is to target individuals living in residential facilities – see below.

In an effort to boost recruitment we have done the following:

1. Contacted various medical and psychiatric colleagues and canvassed for potential referrals. This included discussion with geriatrician colleagues in Perth and Melbourne to actively seek referrals from memory clinics, older adult psychiatric services and private practitioners. We have distributed invitation packs to relevant clinics and used the investigators' clinical networks to raise awareness of the trial.
2. Applied for an amendment with the ethics committee to advertise the trial at the Alzheimer's Association and in local media. These advertisements are currently being placed.
3. Applied for an amendment to recruit participants from residential facilities and partnered with local care providers (e.g. Brightwater group). The plan will be to run the intervention at the care facility and therefore hopefully mitigate the concerns about frequent travel. This approach is not without challenges however and the number of potentially eligible participants in residential care is likely to be lower than in the community e.g. severity of dementia and absence of a caregiver.
4. Presentations at the Faculty of Psychiatry of Old Age meeting in Melbourne on the 4th of November (Dr Plakiotis) where the trial was discussed and referrals welcomed.
5. Presentation by Dr Ford at a Dementia Training Australia invited presentation on 17th May 2017. The audience consisted of general practitioners and allied health staff involved in the care of elderly patients with dementia.

The study team is committed to ongoing recruitment over the next 12 months to try and achieve the recruitment target.

Conclusion

Alzheimer's dementia is a common disorder with devastating consequences for sufferers, their carers and their families. The impact of this disease is accentuated by the presence of depression. At present the prevention and treatment of these symptoms is sub-optimal and the use of antidepressants is often associated with adverse effects. Cognitive bias modification is a simple and safe intervention. It can be delivered at home and at flexible time points making it a potentially invaluable intervention for the treatment and prevention of clinically significant depression in individuals with AD and those who care for them.

Budget

This trial is currently recruiting and we are committed to meeting our recruitment targets as set out in the study proposal. The allocated budget has allowed us to set up the infrastructure and establish the procedures for the trial.

The allocated budget has allowed us to:

- Fund 2 research assistants (1 in Perth and 1 in Melbourne covering both recruitment sites).
- Purchase 6 sets of computers, monitors and response boxes (2 in each centre)
- Facilitate training in the research procedures i.e. the project manager (Julian Basanovich) travelled to Melbourne for this purpose
- Meet costs associated with trial registration, ethics and governance
- Fund advertisements in local media
- Facilitate implementation recruitment strategies in residential care facilities

Acknowledgements

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Disclaimer

The views expressed in this work are the views of its author/s and not necessarily those of the Australian Government.

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