



# Online Symposia 2021

## Anxiety and Depression in Dementia Research (ADDResearch) Network Inaugural International Symposium

Friday 17th September 2021

10am – 12.30pm Australian Eastern Standard Time (AEST)



Australian Government  
National Health and Medical Research Council

## Anxiety and Depression in Dementia Research Network Inaugural International Symposium

Friday 17<sup>th</sup> Sept 2021: 10am – 12.30pm Australian Eastern Standard Time (AEST)

### WELCOME & CHAIRS



**Professor Henry Brodaty**  
DCRC, UNSW Sydney



**Dr Nadeeka Dissanayaka**  
University of Queensland



**Dr Claire Burley**  
DCRC, UNSW Sydney

Register for  
**FREE** here:  
<https://tinyurl.com/2vt3mfhj>

### SPEAKERS & EXPERT PANEL



**Prof Neil Page**  
Dementia Advocate



**Gabriela Pacas Fronza**  
University of Queensland



**Prof Viviana Wuthrich**  
Macquarie University



**Dr Simone Reppermund**  
UNSW Sydney



**Prof Nancy Pachana**  
University of  
Queensland



**Prof Sherry Beaudreau**  
VA Palo Alto Health Care  
System/ Stanford  
University, **USA**



**Prof Sunil Bhar**  
Swinburne University  
of Technology



**Prof Roseanne Dobkin**  
Rutgers University,  
**USA**

## PROGRAM

### Anxiety and Depression in Dementia (ADD) Research Network International Symposium

Friday 17<sup>th</sup> September, 10am – 12.30pm Australian Eastern Standard Time (AEST)

Time	Action
10:00am – 10:05am (5 mins)	<b>Dr Nadeeka Dissanayaka</b> Open the symposium
10:05am – 10:10am (5 mins)	<b>Prof Henry Brodaty</b> Co-Director, DCRC, Queensland University of Technology <b>Welcome</b>
10:10am-10:25am (15 mins)	<b>Prof Neil Page</b> Dementia Advocate: Involving people with lived experiences of dementia in ADDResearch
<b>Session 1</b> <b>10:25am – 10:55am</b>	<b>SESSION CHAIR: Dr Claire Burley</b> (7 minutes per talk, each followed by 3 minutes Q&A)
10:25am – 10:35am (10 mins)	<b>Presenter 1: Gabriela Pacas Fronza</b> PhD Scholar, The University of Queensland Centre for Clinical Research, Faculty of Medicine  <b>Topic: Remote delivery of Technology assisted Cognitive Behavioural Therapy for People living with Dementia in the community</b>
10:35am – 10:45am (10 mins)	<b>Presenter 2: Prof Viviana Wuthrich</b> Director of Centre for Ageing, Cognition and Wellbeing Department of Psychology, Centre for Emotional Health, Macquarie University  <b>Topic: Reducing dementia risk by tackling anxiety and depression</b>
10:45am – 10:55am (10 mins)	<b>Presenter 3: Dr Simone Reppermund</b> Senior Lecturer, University of New South Wales

	<b>Topic: Late-life depression and dementia –health profiles, health services use and transition to dementia</b>
<b>10:55am - 11:00am (5 mins)</b>	<b>BREAK</b>
<b>Session 2 11:00am – 12:00pm</b>	<b>SESSION CHAIR: Dr Nadeeka Dissanayaka</b>
11:00am - 11:15am (15 mins)	<p><b>Presenter 4: Prof Nancy Pachana</b> Professor of Clinical Geropsychology, School of Psychology, The University of Queensland</p> <p><b>Topic: Detecting and Diagnosing Anxiety and Depression in Dementia</b></p>
11:15am - 11:30am (15 mins)	<p><b>Presenter 5: Prof Sherry Beaudreau</b> Director (National), VA Advanced Fellowship Program in Mental Illness Research and Treatment Investigator, Sierra Pacific MIRECC, Palo Alto VA Clinical Professor (Affiliated), Psychiatry &amp; Behavioral Sciences, Stanford University, USA</p> <p><b>Topic: Adapting the Mental Health Treatment of Anxiety and Depression for Older Adults with Cognitive Concerns</b></p>
11:30am - 11:45am (15 mins)	<p><b>Presenter 6: Prof Sunil Bhar</b> Department of Psychological Sciences, Faculty of Health, Arts and Design, Swinburne University of Technology, Australia</p> <p><b>Topic: Cognitive behaviour therapy for depression and anxiety in dementia in aged care residents living in nursing homes in Australia: A cluster randomised trial</b></p>
11:45am – 12:00pm (15 mins)	<p><b>Presenter 7: Prof Roseanne Dobkin</b> Professor of Psychiatry, Rutgers University Robert Wood Johnson Medical School, USA</p>

	<b>Topic: Non-pharmacologic and virtual treatment of depression in Parkinson's disease.</b>
<b>Expert Panel</b> 12:00pm – 12:20pm (20 mins)	<b>EXPERT PANEL DISCUSSION &amp; AUDIENCE Q&amp;A</b> <b>Moderators:</b> Dr Nadeeka Dissanayaka/ Dr Claire Burley <b>EXPERT PANEL:</b> Prof Neil Page, Prof Sherry Beaudreau, Prof Sunil Bhar, Prof Roseanne Dobkin, Prof Viviana Wuthrich, Prof Nancy Pachana <i>'Where do we go next with ADDResearch?'</i>
12:20pm – 12:27pm (7 mins)	<b><i>Prof Henry Brodaty Summarises</i></b> Co-Director, University of New South Wales
12:27pm – 12:30pm (3 mins)	<b>Dr Nadeeka Dissanayaka: Close</b>

The DCRC Online Symposia are recorded for broad circulation and are available to view after the events here: <https://dementiaresearch.org.au/projects/changed-behaviours/>

# Lived Experiences with Anxiety, Depression and Dementia

In support of a holistic approach to research

Neil Page

Engineer

Husband of Sue Page

Deep Brain Stimulation Support Group of Parkinson's Queensland

Volunteer, Dovetree Aged Care Facility - Wesley Mission

Member Consumer and Community Involvement Group, Dementia & Neuro Mental  
Health Research Unit

E: [npage2@bigpond.com](mailto:npage2@bigpond.com)



# Sue's journey with Parkinson's Disease

## One of many neuro-degenerative diseases

### Timeline for neuro-psychiatric symptoms



**Sue Page**  
**1941-2021**

Date	Events	Anxiety	Depression	Dementia
c1980			Episodic	
1997	PD diagnosis		Episodic	
2003	End DRT "honeymoon"		Episodic	
2010	DBS surgery for PD	Episodic	Regular	
2013	Major fall injury Home care starts	Episodic	Regular	Episodic
2017		Episodic	Regular	Episodic
2020	Major fall injury Residential care	Regular	Regular	Frequently Episodic
2021	Terminal fall injury	Regular	Regular	Frequently Episodic

# Things that help

## Without a cure it is all about quality of life

### For those living with ADD *and* their care givers:

- **Whatever you wanted to do in life, do it now**
  - Mental and physical stimulation helps – do some fun things
- **Join a support group**
  - Distancing of old friends – reach out to those on the same journey
- **Write a journal**
  - Therapeutic and invaluable for consultations with doctors and researchers
- **Seek permission to record medical consultations**
  - Hard to remember details of short infrequent meetings – share with family
- **Accept help**
  - From anyone who offers – Team Sue
- **Prepare yourself for the possibility of residential care**



# Things that help

## Without a cure it is all about quality of life

### For researchers:

- **Recognise the holistic nature of the disease**
  - What you are interested in is likely to be a small part of a very complex illness
  - Be aware of all the symptoms – interactions with and between neuro-psychiatric
  - Do some volunteering in an aged care facility
- **ADD often presents at the advanced stages of PD**
  - Keep sessions short and during alert periods
- **Involve the care-giver**
  - Those with ADD sometimes in denial. Care-givers often notice more things

# Things that help

## Without a cure it is all about quality of life

### For doctors, clinicians:

- **Be accessible**
  - Unexpected events add greatly to anxiety – set up help desk
- **Try to include the care-giver in consultations**
  - They can be 24/7 observers
- **Encourage the care-giver in particular to keep and bring a journal to the consultations**
- **Encourage (or provide) recordings of consultations**
- **Be prepared to talk about the future**
  - Prognosis is difficult, but knowledge allows transition from reactive to proactive care
- **Look after the care-giver. They are on the job 168 hours in the week.**

I hope I have been able to show a little of what those with *lived experience* can contribute to the contextual understanding, scoping and focus of research into Anxiety, Depression and Dementia

**THANK YOU FOR WATCHING AND LISTENING**

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# Cognitive behaviour therapy for depression and anxiety in dementia in aged care residents in Australia: A cluster randomised trial

Blending technology with person centred care to enrich quality of life of older adults with dementia who live in residential care

Prof Sunil Bhar, [sbhar@swin.edu.au](mailto:sbhar@swin.edu.au), DCRC September 2021  
Collaborators: Mark Silver, Rebecca Collins, Deborah Koder, Jahar Bhowmik & Raaj Biswas

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# Mental health of older adults with dementia who live in nursing homes

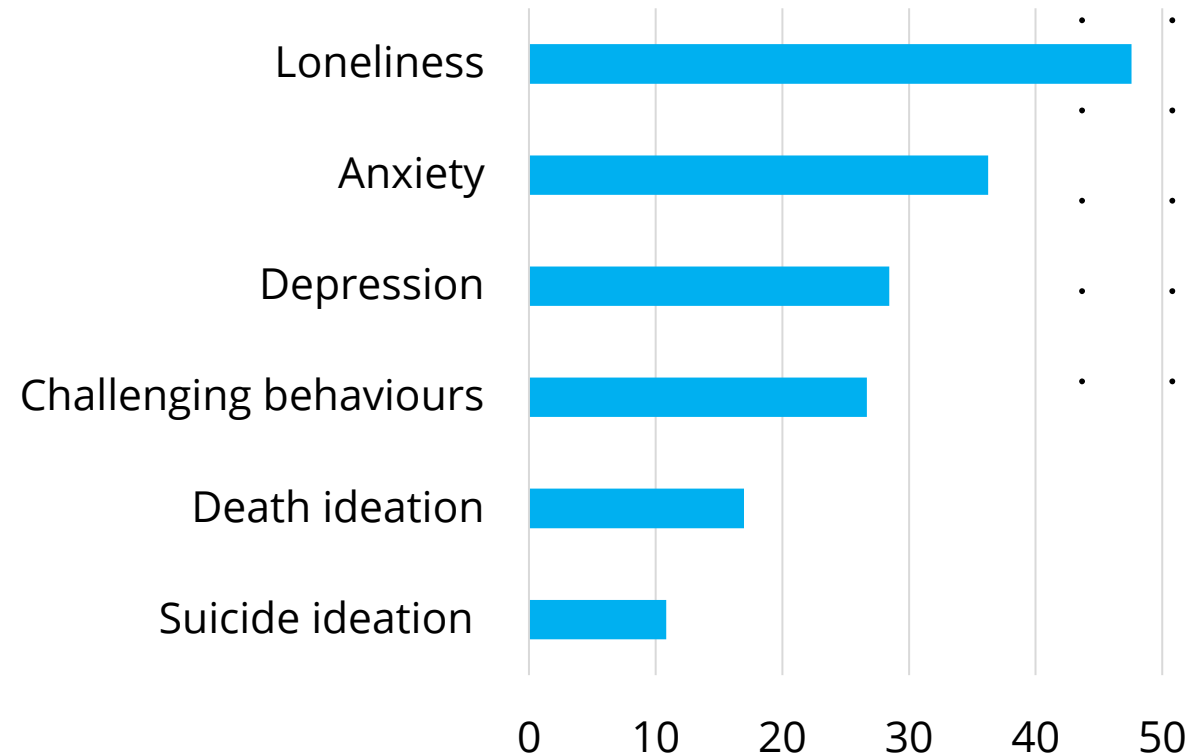
- There are approximately 335 889 aged care residents, in Australia, of whom 52% are diagnosed with dementia
- Of these residents with dementia, approximately 50% (90,000 residents) have significant levels of depression or anxiety
- Very little evidence for the effectiveness of psychological treatments for depression and anxiety in aged care residents with dementia
- Access to support is very poor; residential staff and clinicians experience barriers in managing such symptoms, resulting in an over reliance on medication

# Swinburne Wellbeing Clinic for Older Adults

<https://www.swinburne.edu.au/research/centres-groups-clinics/wellbeing-clinic/>

Established in 2011

- Psychological services for aged care residents
- Training for trainee psychologists, social workers and counsellors
- Education services for aged care staff
- Family support
- Volunteering and digital stories
- Research
- National telehealth counselling and support service



Mental health profile of residents, in response to COVID-19  
(Brydon et al, 2020 preliminary data on 121 facilities)



# The Dementia in Aged Care Study (DACS)

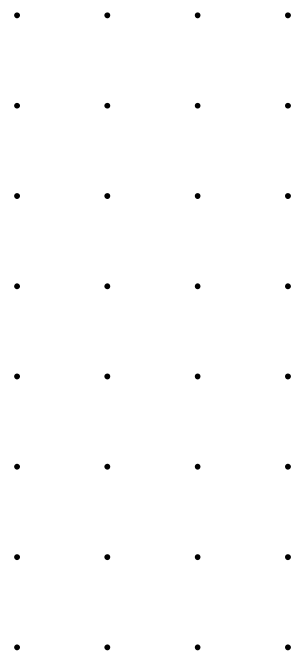
- Funded by the Australian Government Department of Health under the Dementia and Aged Care Services Fund
- Conducted by Swinburne University of Technology, in collaboration with Dementia Australia and Residential Aged Care Networks
- To examine if cognitive behaviour therapy (CBT) was associated with significantly greater improvement in depression, anxiety and quality of life for aged care residents with mild to moderate dementia, compared with usual care



# The Dementia in Aged Care Study (DACCS)

## Design

- Cluster randomised controlled trial, involving 21 residential aged care facilities in Greater Melbourne
- Residents were referred by staff to the trial. Residents were eligible if they were 65+, had a diagnosis of dementia, had mild to moderate cognitive impairment (PAS-CI 4-15), and had significant levels of depression (CSDD 7+) or anxiety (RAID 11+)



# The Dementia in Aged Care Study (DACCS)

## Participants (N = 133)

Demographic	Mean
Age	Mean 85.6 (SD = 8.4), range 65-100
Gender	Female 66%
Country of birth	Australia 74%
Language at home	English 90%
Education	Did not finish high school 55%, completed university, 19%
Montreal Cognitive Assessment	12.92 (6.16), range 1 – 27 (2 in the 26+ normal range)



# The Dementia in Aged Care Study (DACCS)

## Assessments at baseline, 6 months and 9 months

Outcomes	Measures	Items	Example items	Perspectives
Depressive symptoms	Cornell scale for depression in dementia (CSDD)	19	“Have you been feeling down or sad this past week? Over the past week, were you able to enjoy pleasant events fully? In the past week, have you felt less interested in what you usually like to do?”	Resident Staff Research assistants
Anxiety symptoms	Rating Anxiety in Dementia (RAID)	18	“Have you been feeling frightened or anxious this past week? Have you been jumpy or easily startled this past week? Have you experienced trembling in the past week?”	Resident Staff Research assistants
Quality of life	Quality of Life – Alzheimer’s Disease (QOL-AD)	15	“When you think of your life overall, everything together, how do you feel about your life? How do you feel about your relationship with people who work here? How do you feel about your physical health?”	Resident Staff

# The Dementia in Aged Care Study (DACCS)

## Treatment

- Facilities were randomised to treatment (11 facilities) or no-treatment (10 facilities)
- Treatment involved individual sessions with residents and education/support activities with staff and families



# The Dementia in Aged Care Study (DACCS)

## Individual sessions with residents

- Twenty sessions of CBT, over approximately 6 months
- Therapists was a postgraduate students (psychology, social work, counselling) under supervision
- Involved anxiety management, behavioural activation, cognitive restructuring and reminiscence
- Augmented by a systemic approach, concrete strategies, reminiscence, ambiguity tolerance and memory aids





# The Dementia in Aged Care Study (DACCS)

## Education/support with family and staff

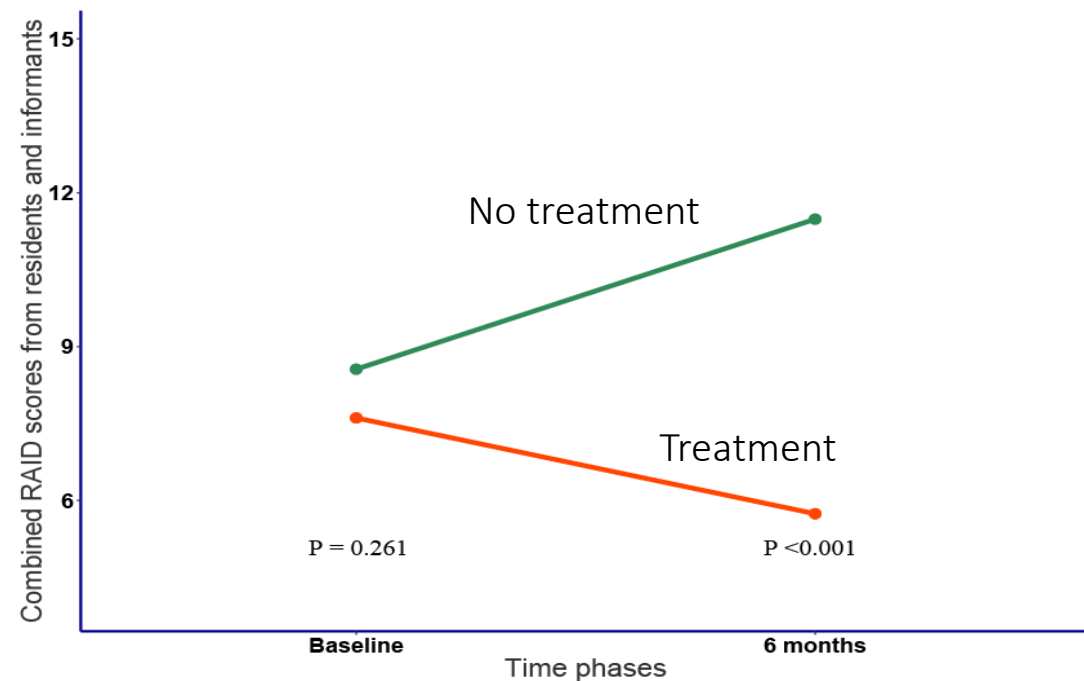
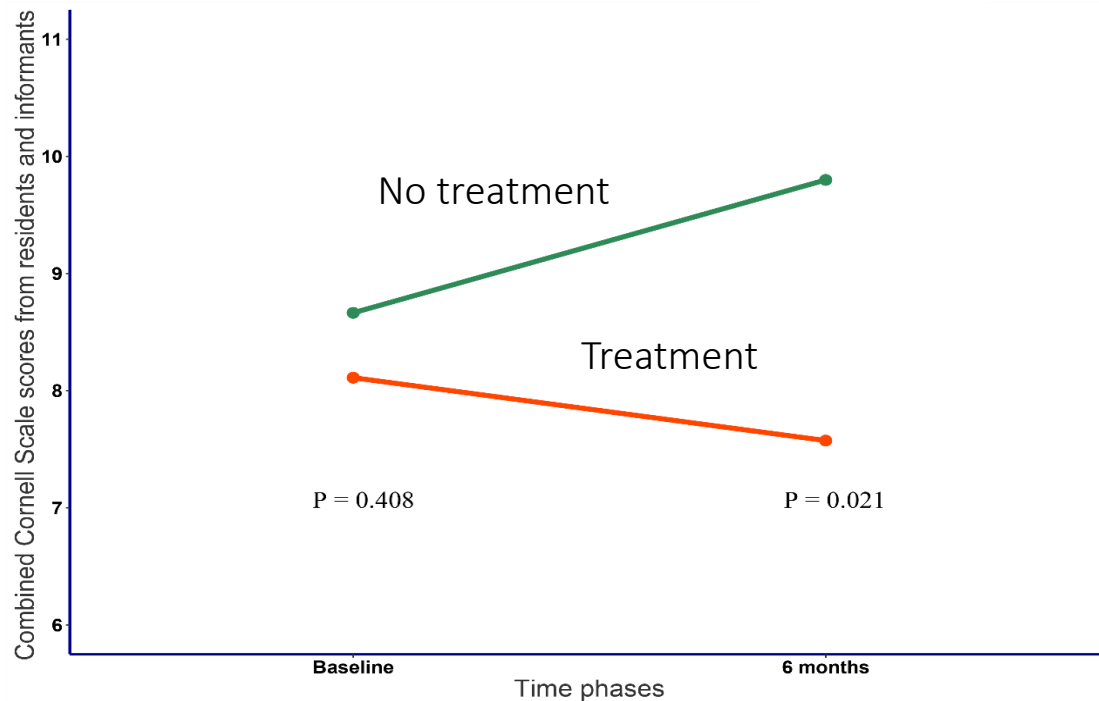
- Virtual reality training program – Educational Immersive Dementia Experience (EDIE)
- Monthly family support groups
- Monthly staff consultation meetings



<https://www.dementia.org.au/learning/centre-for-dementia-learning/edie-educational-dementia-immersive-experience>

# The Dementia in Aged Care Study (DACCS)

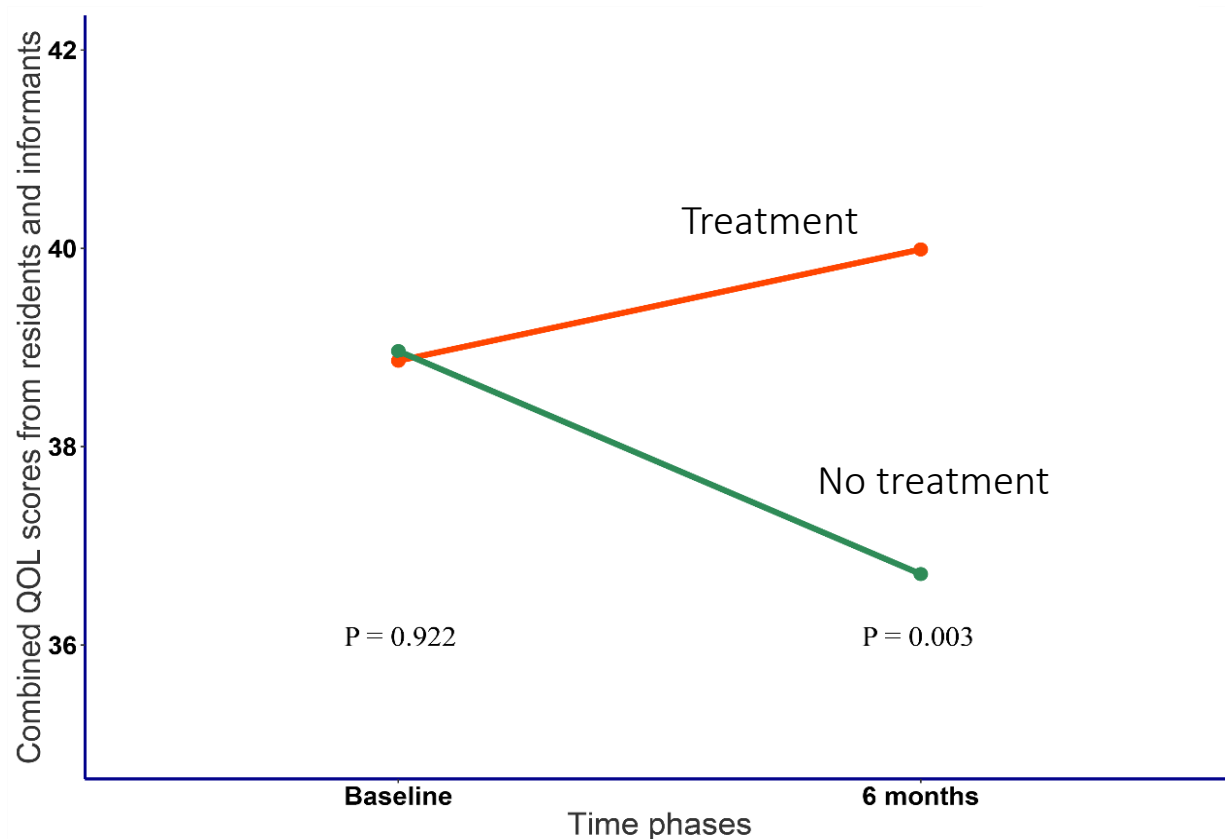
## Results: Depression and anxiety



Sunil Bhar et al (in preparation). Cognitive behavioural therapy for reducing depression and anxiety in older adults with dementia who are living in residential aged care homes: A clustered randomised controlled trial. Funded by the Dementia Aged Care Services Fund (Grant activity ID 4-4Z4CMPS)

# The Dementia in Aged Care Study (DACCS)

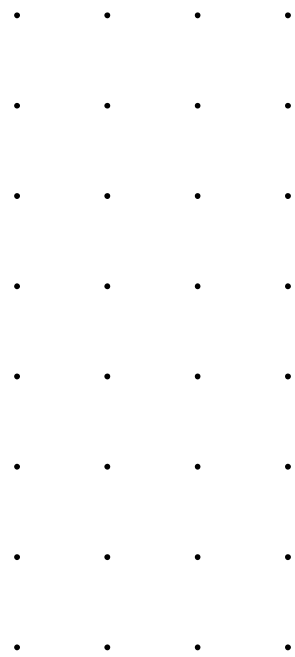
## Results: Quality of life



# The Dementia in Aged Care Study (DACCS)

## Case illustration

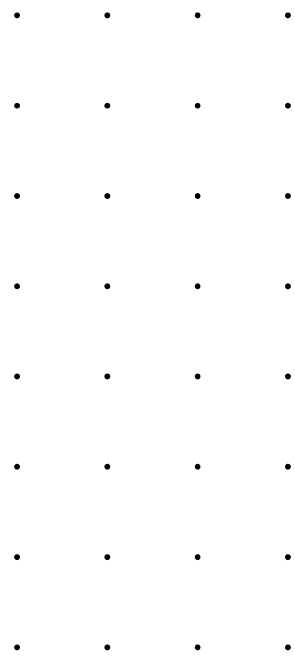
- Eleanor, 81 year old woman diagnosed with Alzheimer's disease five years ago; rapid forgetting and reduced verbal fluency
- Loneliness ("others are too busy to visit"); forgot visits. Frustrated at the lack of physical activities within the facility
- Eleanor sent paintings to her friends interstate. Son assisted. Whiteboard in room as reminder of visitors. Eleanor encouraged to join facilities activities
- Eleanor reported feeling happier and more settled, echoed by family and staff



# The Dementia in Aged Care Study (DACCS)

## **What can staff do to help reduce depression and anxiety**

- Part of a team: Families, staff, resident, counsellors
- Reminisce together with the resident (and family member)
- Facilitate activities that are meaningful for the resident
- Promote anxiety management strategies
- Remind the resident to use coping statements and thinking skills
- Develop and use wellness plan in ongoing care



# Resources

## What other resources are there to support you and residents?

- National telehealth counselling and support service [www.swin.edu.au/telehealthcounselling](http://www.swin.edu.au/telehealthcounselling)
- Carers Gateway (for families) -tel:1800422737 [www.carergateway.gov.au](http://www.carergateway.gov.au)
- Carers Victoria – 1800 541 845 [www.carersvic.org.au](http://www.carersvic.org.au)
- Primary health networks (government funded) <https://www.health.gov.au/initiatives-and-programs/phn>
- Private mental health practitioners (Medicare funded)
- Community Visitors Scheme <https://www.health.gov.au/initiatives-and-programs/community-visitors-scheme-cvs>
- Australian Centre for Grief and Bereavement – 9265 2100 <https://www.grief.org.au/>
- Dementia Support Australia and Dementia Australia 1800 100 500 [www.dementia.org.au](http://www.dementia.org.au)



# National telehealth counselling and support service for residential aged care

- Open to any aged care resident living in Australia - as well as to families and aged care staff
- Free – phone or video calls
- [swin.edu.au/telehealthcounselling](https://swin.edu.au/telehealthcounselling)



Thank you





**MACQUARIE**  
University

# **Reducing risk for dementia by tackling depression in primary care**

VIVIANA WUTHRICH  
CENTRE FOR AGEING, COGNITION & WELLBEING



# Centre for Ageing, Cognition & Wellbeing

[HTTPS://WWW.MQ.EDU.AU/RESEARCH/CACW](https://www.mq.edu.au/research/cacw)



STUDY RESEARCH CONNECT ABOUT 



**CENTRE FOR AGEING,  
COGNITION, AND  
WELLBEING**[Our People](#) >[Our Research](#) >[Events](#) >[Engage with Us](#) >[Media](#) >[Resources](#) >

## Centre for Ageing, Cognition, and Wellbeing

### Collaborating to explore normal and abnormal aspects of ageing

The Centre for Ageing, Cognition, and Wellbeing in the Faculty of Medicine, Health and Human Sciences at Macquarie University is a collaborative group of multidisciplinary researchers with interest in the normal and abnormal aspects of ageing. This includes research related to understanding and improving wellbeing related to neurodegenerative diseases, mental disorders, and health related conditions in the community and residential aged care. In addition, we are interested in understanding the normal impacts of ageing on cognition, reading, emotion regulation, social connections and workforce participation (retirement). We are also interested in studying how cognitive support systems (e.g. engaging in skilled activities with others) may benefit older adults. We have close connections with researchers

**Managing COVID19  
Distress- Resources  
and Updates Click  
here****CONTACT US**

Level 7  
4 First Walk  
Macquarie University  
NSW 2109

Ph: +61 2 9850 4866  
(Dr Viviana Wuthrich)

# Livingston et al.'s (2020). The Lancet Commission

	Relative risk for dementia (95% CI)	Risk factor prevalence	Communality	Unweighted PAF	Weighted PAF*
<b>Early life (&lt;45 years)</b>					
Less education	1.6 (1.3–2.0)	40.0%	61.2%	19.4%	7.1%
<b>Midlife (age 45–65 years)</b>					
Hearing loss	1.9 (1.4–2.7)	31.7%	45.6%	22.2%	8.2%
Traumatic brain injury	1.8 (1.5–2.2)	12.1%	55.2%	9.2%	3.4%
Hypertension	1.6 (1.2–2.2)	8.9%	68.3%	5.1%	1.9%
Alcohol (>21 units/week)	1.2 (1.1–1.3)	11.8%	73.3%	2.1%	0.8%
Obesity (body-mass index ≥30)	1.6 (1.3–1.9)	3.4%	58.5%	2.0%	0.7%
<b>Later life (age &gt;65 years)</b>					
Smoking	1.6 (1.2–2.2)	27.4%	62.3%	14.1%	5.2%
Depression	1.9 (1.6–2.3)	13.2%	69.8%	10.6%	3.9%
Social isolation	1.6 (1.3–1.9)	11.0%	28.1%	4.2%	3.5%
Physical inactivity	1.4 (1.2–1.7)	17.7%	55.2%	9.6%	1.6%
Diabetes	1.5 (1.3–1.8)	6.4%	71.4%	3.1%	1.1%
Air pollution	1.1 (1.1–1.1)	75.0%	13.3%	6.3%	2.3%

Data are relative risk (95% CI) or %. Overall weighted PAF=39.7%. PAF=population attributable fraction. \*Weighted PAF is the relative contribution of each risk factor to the overall PAF when adjusted for communality.

**Table 1: PAF for 12 dementia risk factors**

# Direct Effects

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- Anxiety and depression are common
  - 1 in 20 Australians aged 65 years and over met criteria for depression and/or an anxiety disorder in the past year (Sunderland et al. 2015)
  - comorbid across lifespan, up to 50% with a mood disorder have a concurrent anxiety disorder (Beekman et al. 2000)
- Mechanisms are unclear
  - Depression - bidirectional risk with cardiovascular disease
  - Depression associated with a range of neurobiological brain changes including hippocampal loss, dysfunction of the hypothalamic–pituitary–adrenal axis (Naismith et al., 2012)
- Anxiety not established in systematic review (mixed evidence)
  - chronic anxiety might result in cortisol-mediated hippocampal neurotoxicity (Dar-Nimrod et al, 2012; Mah et al., 2015)

# Indirect Effects

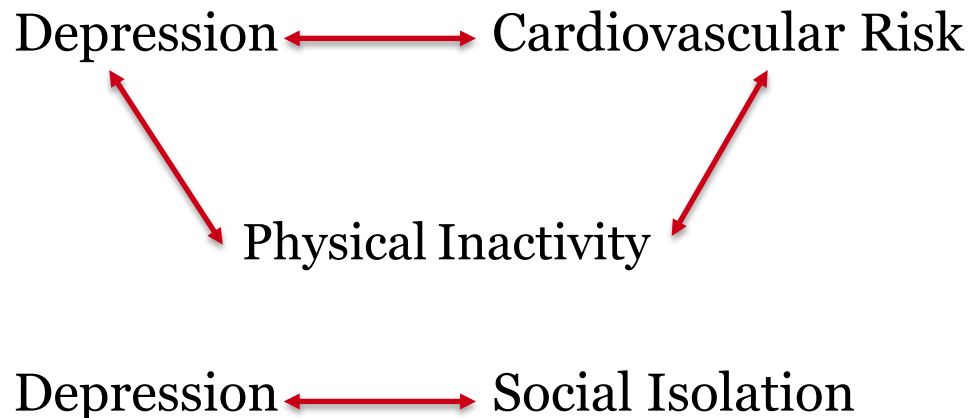
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- Depression & anxiety associated with:
  - poorer physical health – less physical activity?
  - increased benzodiazepine use (increased risk for cognitive decline & dementia (Paterniti et al., 2002)
  - reduced social participation and isolation (Hodgetts et al., 2017) – bidirectional
  - poorer sleep –not in systematic review (emerging)
  - poorer diet? (mixed)
  - less mental stimulation (mixed)
  - diabetes – linked with subsequent depression (Anstey et al. 2009)



# Risk Increases with N of Factors

- One risk factor is associated with an 20% increase in risk of incident dementia, two risk factors with an 65% increased risk and three or more with a doubling of risk compared to no risk (Peters ...Anstey, 2019)
- Large overlap and interaction of risk factors



# Happy Healthy Ageing Program



- Targeted older adults with depression and/or anxiety
- Evaluated two versions of a 16 session multidomain CBT + motivational interviewing program (face-to-face vs work-at-home)
- Targeted the following risks:
  - Depression and Anxiety
  - Physical Exercise
  - Social Participation
  - Mental Stimulation
  - Alcohol use and smoking
  - Diet and weight loss

International Psychogeriatrics: page 1 of 11 © International Psychogeriatric Association 2018  
doi:10.1017/S1041610218001485

## Reducing risk factors for cognitive decline through psychological interventions: a pilot randomized controlled trial

Viviana M. Wuthrich,<sup>1</sup> Ronald M. Rapee,<sup>1</sup> Brian Draper,<sup>2</sup> Henry Brodaty,<sup>3</sup> Lee-Fay Low,<sup>4</sup> and Sharon L. Naismith<sup>5</sup>

<sup>1</sup>Centre for Emotional Health, Department of Psychology, Macquarie University, Sydney, Australia

<sup>2</sup>School of Psychiatry, University of New South Wales, Sydney, Australia

<sup>3</sup>Centre for Healthy Brain Ageing, University of New South Wales, Sydney, Australia

<sup>4</sup>Faculty of Health Sciences, University of Sydney, Sydney, Australia

<sup>5</sup>Healthy Brain Ageing Program, The University of Sydney, Sydney, Australia

### ABSTRACT

**Objectives:** Modifiable factors associated with increased risk of cognitive decline include emotional (anxiety, depression), cognitive (low social and mental stimulation), and health factors (smoking, alcohol use, sedentary lifestyle, obesity). Older adults with anxiety and depression may be at heightened risk due to direct and indirect impacts of emotional distress on cognitive decline.

**Design:** Randomized controlled trial

**Setting:** Community sample attending a university clinic. Participants: 27 participants (female = 20) aged over 65 years ( $M = 72.56$ ,  $SD = 6.74$ ) with an anxiety and/or mood disorder. Interventions: two cognitive behavioral therapy (CBT) interventions (face-to-face or low intensity) that targeted emotional, health, and cognitive risks for cognitive decline.

**Measurements:** Participants completed diagnostic interviews; self-report measures of anxiety, depression, quality of life, and lifestyle factors at baseline; post-treatment; and 3-month follow-up.

**Results:** Both interventions resulted in significant and sustained improvements in depression, anxiety, quality of life, and physical and social activity. At post-treatment, face-to-face CBT demonstrated significantly greater improvements in emotional symptoms, alcohol use, and memory (exercise approached significance). At

# Current Study – Risk Reduction in Primary Care

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- Partnering with a Primary Health Network, to codesign and evaluate a prevention approach to screening and intervention
  - Testing attitudes to risk screening
  - Developing approaches to utilise routine data to screen for risks to wellbeing and dementia
  - Evaluating the best methods to communicate results to patients & GPs
  - Evaluate effectiveness of prevention/treatment based efforts

# Acknowledgements



The Ian Potter  
Foundation



Medical Research  
**Future Fund**

## **Collaborators:**

Sydney North Primary Health Network

Professor Simon Willcock, Professor Mike Jones, Dr Henry Cutler, Dr Carly Johnco, Dr Diana Matovic, Dr Malene Ahern



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University

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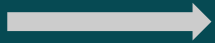
# Late-life depression and dementia – health profiles, health services use and transition to dementia

Simone Reppermund



Centre  
for Healthy  
Brain Ageing

Depression



Dementia



Dementia



Depression



Late-life depression is one of the most common psychiatric disorder in older adults (3%-10% in 65+)

Due to demographic changes and longer life expectancy, dementia prevalence will triple in next 40 years

Older adults are at risk for depressive symptoms and decreasing cognitive function



# Depression and the risk for dementia

## Depression and Risk for Alzheimer Disease

*Systematic Review, Meta-analysis, and Metaregression Analysis*

Raymond L. Ownby, MD, PhD, MBA; Elizabeth Crocco, MD; Amarilis Acevedo, PhD;  
Vinceth John, MD; David Loewenstein, PhD *Arch Gen Psychiatry*. 2006;63:530-538

→ OR 2.03 (1.81-2.28)

## Dementia risk estimates associated with measures of depression: a systematic review and meta-analysis

Nicolas Cherbuin, Sarang Kim, Kaarin J Anstey *BMJ Open* 2015;5:e008853. doi:10.1136/bmjopen-2015-008853

→ HR 1.98 (1.50-2.63)

## Late-life depression and risk of vascular dementia and Alzheimer's disease: systematic review and meta-analysis of community-based cohort studies

Breno S. Diniz, Meryl A. Butters, Steven M. Albert, Mary Amanda Dew and Charles F. Reynolds 3rd  
*BJP* 2013, 202:329-335.

→ OR 1.85 (1.67-2.04)

## Risk of Dementia in persons who have previously experienced clinically-significant Depression, Anxiety, or PTSD: A Systematic Review and Meta-Analysis

J.K. Kuring, J.L. Mathias, L. Ward *J Affect Disord* 2020; 274:247–261

→ OR 1.91 (1.72-2.12)

- Depression is a risk factor for dementia
- Depression can also be a prodromal feature of dementia



# Health profiles and health service use in late-life depression



What can health profiles and health service use tell us about the risk of developing dementia in people with late-life depression (LLD)?

Aims:

- 1) map health profiles and health service use in LLD and in other MH disorders
- 2) examine the transition to dementia in LLD and in other MH disorders by comparing health profiles and health service use

# Data Linkage

Linkage contains 35,257,037 records for 2,199,534 individuals

HEALTH

DISABILITY

CORRECTIONS

OTHER

## Admitted Patients

(2001-2016)

## Emergency Department

(2005-2016)

## Ambulatory Mental Health

(2001-2015)

## Disability Services

(2005-2015)

## Offenders data

(1994-2016)

## Corrective Services

Disability

(2001-2016)

## Public Guardian NSW (1994-2016)

NSW Ombudsman (2002-2015)

## Education Disability dataset

(2011-2015)

## Registry of Births, Deaths & Marriages

(1994-2016)

## Death Unit Record (1985-2013)

Reppermund et al. BMJ Open 2017; 7:e015627

Reppermund et al. BMJ Open 2019; 9:e031624.

# Cohorts

55,717 people with LLD  
(aged 65+)

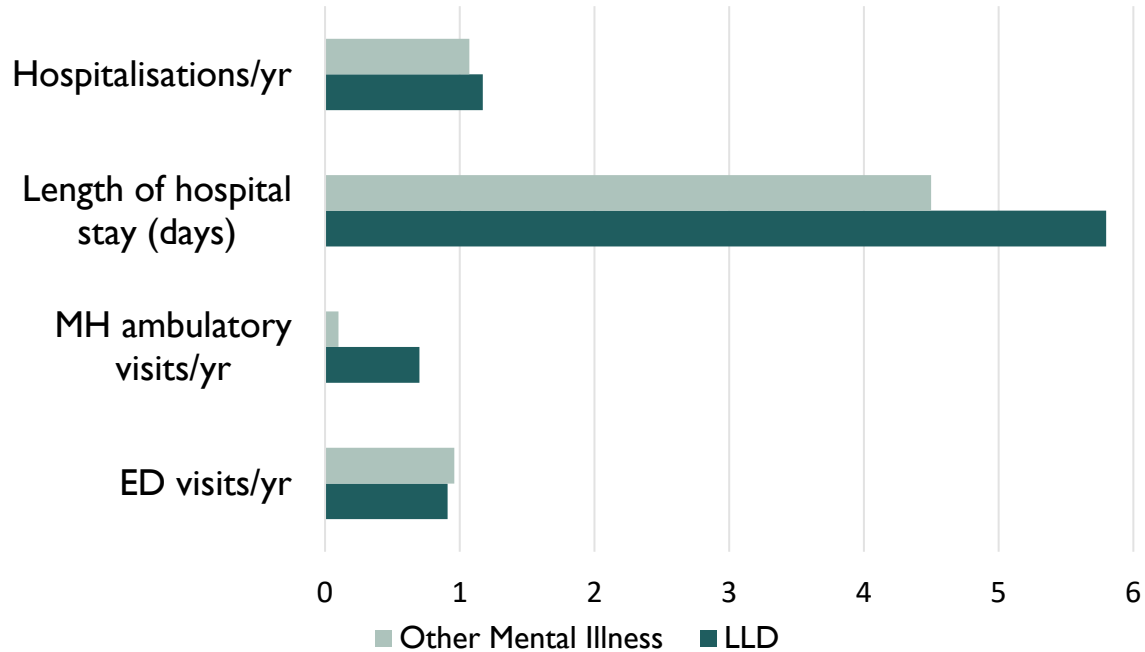
10,457 (18.8%)  
subsequent dementia  
62% female

104,068 people with  
other mental illnesses  
(aged 65+)

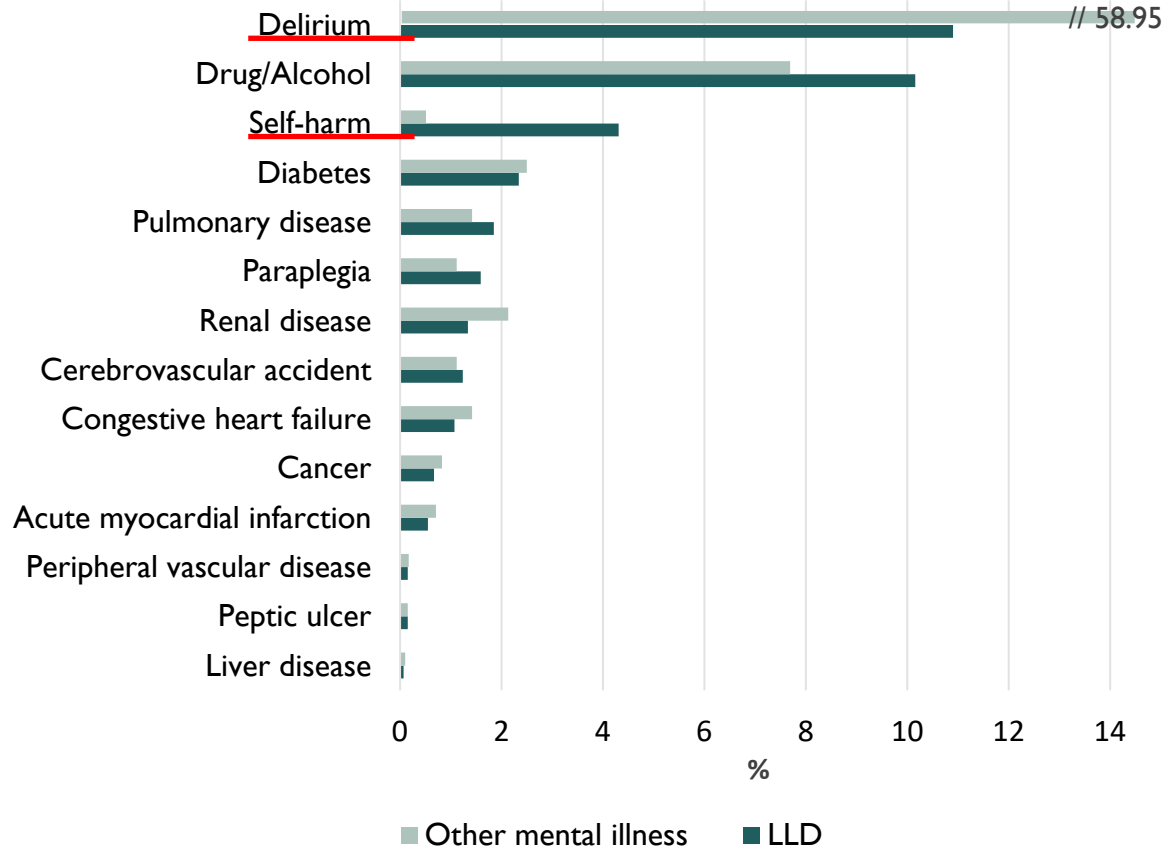
18,103 (17.4%)  
subsequent dementia  
57% female

- Age at dementia diagnosis: 78 years (LLD) versus 80 (other mental illnesses)
- Average time to dementia after diagnosis of LLD: 2.6 years versus 2 years for other mental illnesses

# Health service use



# Comorbidities



## Delirium

- Overlap in clinical features of delirium and depression<sup>1</sup>
- Potential under-recognition of delirium in LLD
- Focus on prevention is needed

## Self-harm

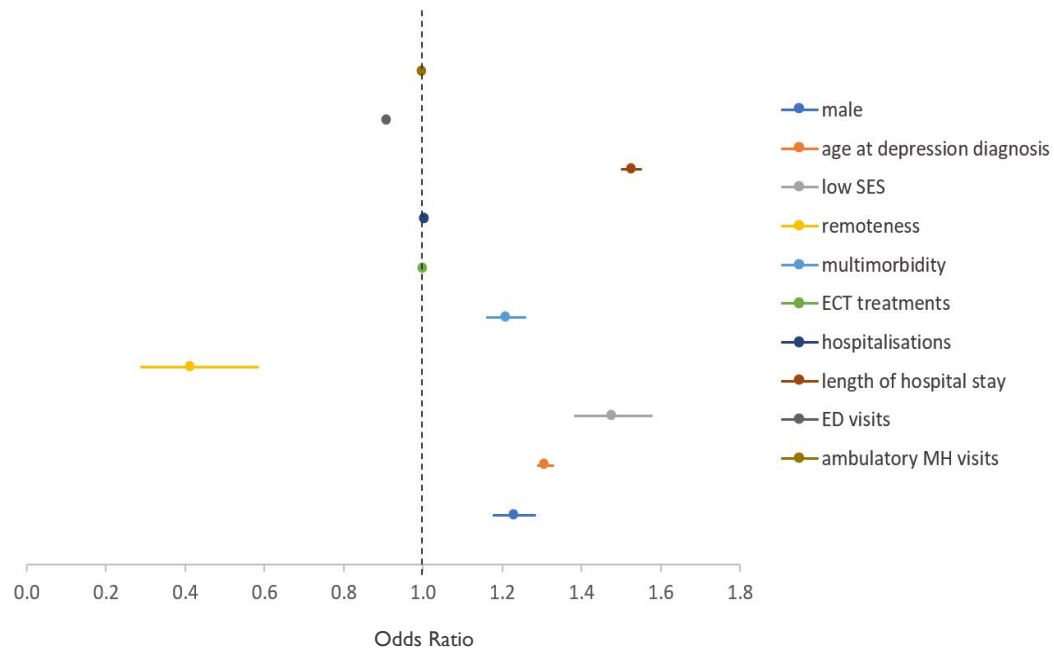
- Depression is linked to self-harm and suicide<sup>2</sup>
- Increased risk of suicide after self-harm<sup>3</sup>

<sup>1</sup>O'Sullivan et al. Lancet Psychiatry 2014; 1:303-11

<sup>2</sup>Mitchell et al. Aging & Mental Health 2017; 21:279-88

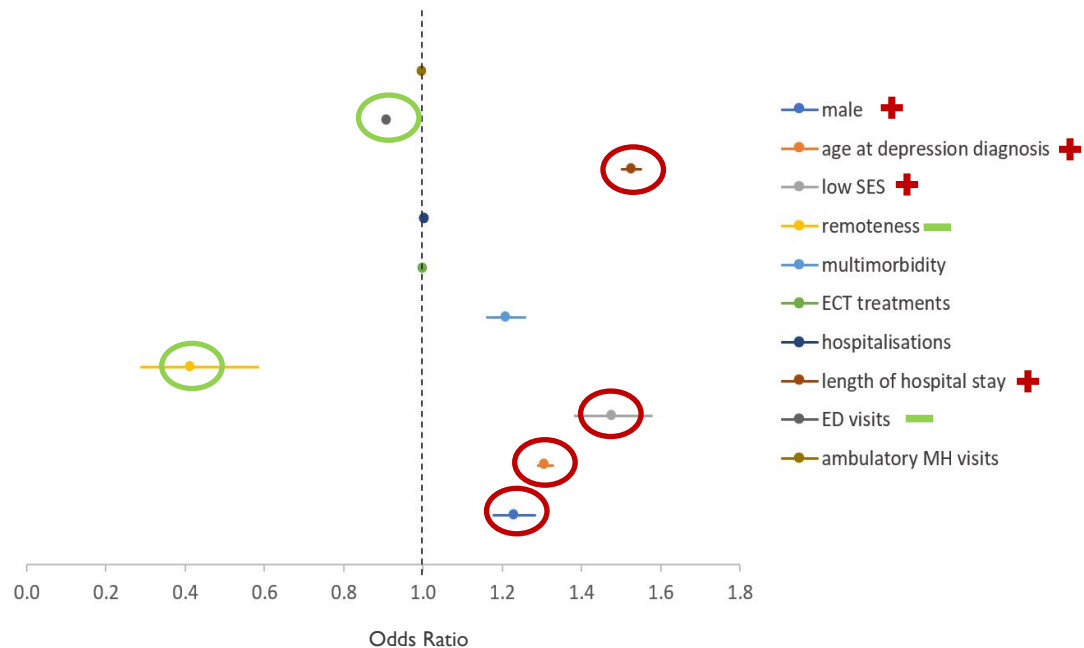
<sup>3</sup>Morgan et al. Lancet Psychiatry 2018; 5:905-12

# Risk of dementia: demographics and health service use



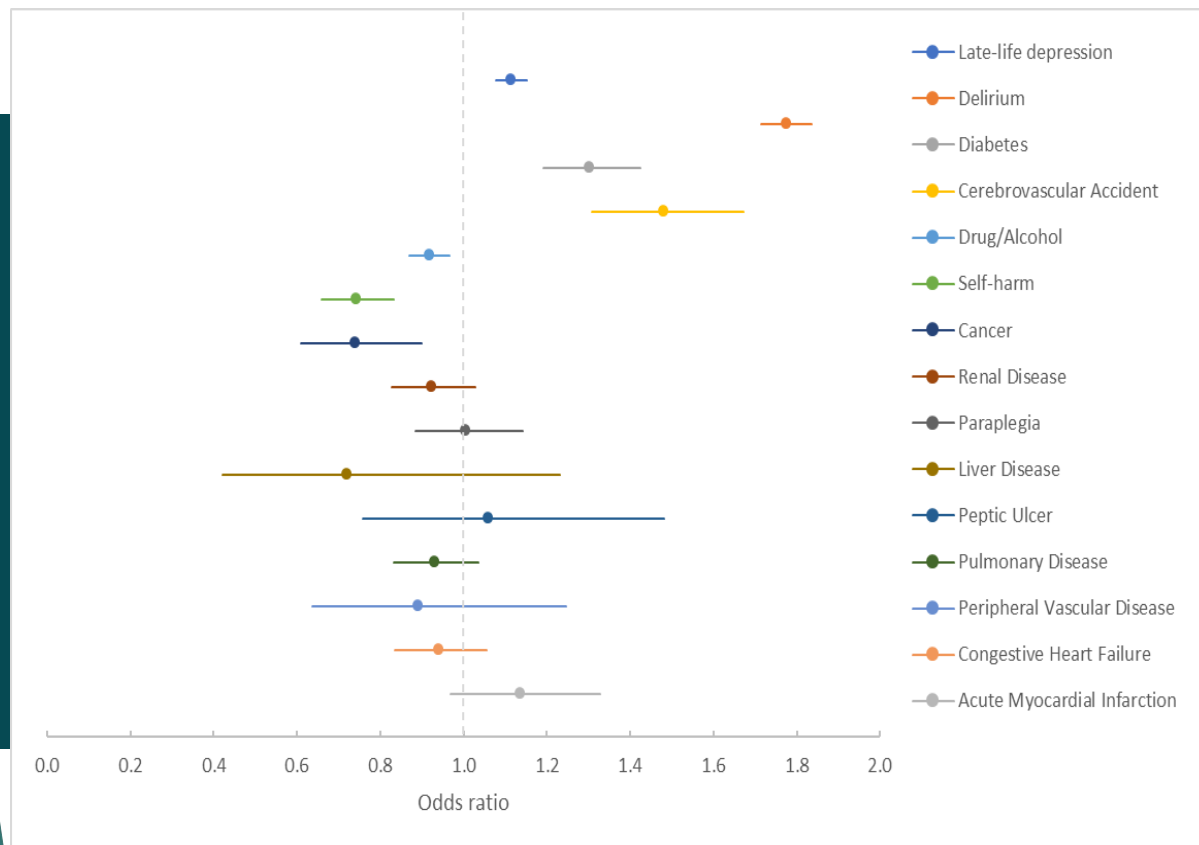


# Risk of dementia: demographics and health service use

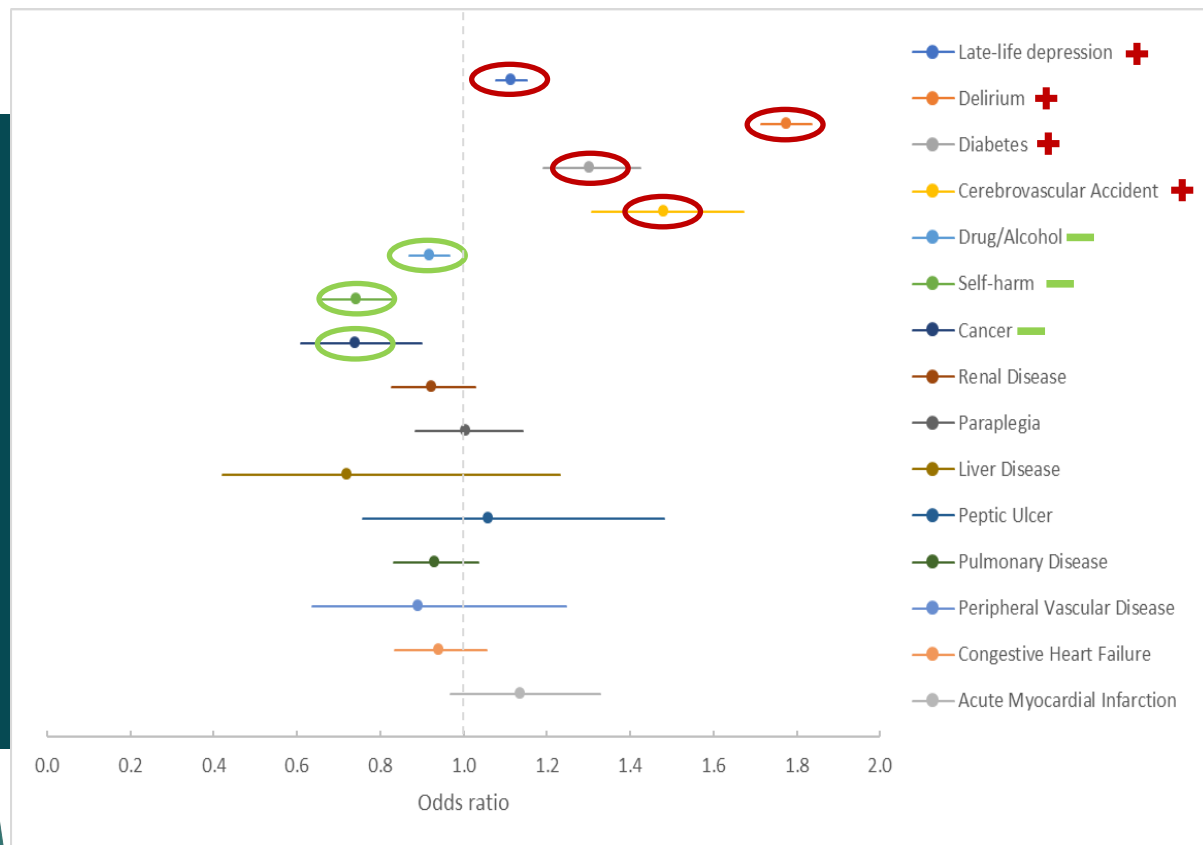




# Risk of dementia: comorbidities



# Risk of dementia: comorbidities



# Summary

Reppermund et al. JAMDA 2021; 22:1465-70

Increased risk of dementia for people with LLD  
(OR: 1.12; 95% CI 1.08-1.52)

Rate of delirium was 6 times lower in LLD  
Rate of self-harm was 8 times higher in LLD

The risk of dementia increased by age, male sex, lower SES, and longer hospital stays. People with more ED visits had a lower risk of dementia

Increased risk of dementia: cerebrovascular accidents, diabetes, delirium  
Decreased risk of dementia: cancer, self-harm, alcohol/other drugs diagnosis

## Conclusions

- Treatment and prevention strategies for LLD and delirium may help to reduce the risk of dementia
- Increased clinical attention to the physical health of older people with mental illness is needed
- Analysis of medication data and GP consultations and comparison with population-based sample

## Limitations

- No primary care data and limited private care data
- Diagnoses based on hospital admission data
- Lack of detailed clinical information

# Thank you!

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DEPARTMENT OF  
DEVELOPMENTAL  
DISABILITY  
NEUROPSYCHIATRY



Centre  
for Healthy  
Brain Ageing

# Adapting Mental Health Treatment to Older Adults with Cognitive Concerns

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*Views expressed in this presentation are those of the speaker and do not necessarily reflect the views of the U.S. Government, or the U.S. Department of Veterans Affairs, and no official endorsement should be inferred*

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# Cognitive Concerns



None

Some cognitive concerns

Neurocognitive disorders



No  
Cognitive  
Concerns,  
but...

## Mild Behavioral Impairment (MBI)

- Major behavioral change in past 6 months
  - No neurocognitive or psychiatric diagnosis
  - No functional changes

## Many older adults with MBI convert to dementia

- *Dementia conversion over 5-year follow up*
  - 34% with MCI (of 239)
  - 70% with MBI no cognitive concerns
- *Taragano et al., 2009 J Clin Psychiatry*

# Some Cognitive Concerns, but No Neurocognitive Disorder

Subjective concerns

Below expectation for age & education


- Age-related vs. Life long
- Cognitive functioning often lower than expected with late life psychiatric symptoms and psychiatric disorders

Mild impairments

Among  
Neurocognitive  
Disorders...

Not all persons with mild neurocognitive disorders convert to major neurocognitive disorders / dementia

Critical role of neuropsychiatric symptoms and disorders, such as anxiety and depression



“The burden of Alzheimer’s disease (AD) is compounded by neuropsychiatric symptoms (NPS) which occur in almost all patients, and are usually persistent.”



*Leoutsakos et al., 2005 J Alzheimers Dis*

# Cognition and Emotion Regulation

- Lower performance in some neurocognitive domains in older adults with higher severity of anxiety and depressive compared with those with minimal symptoms (*Beaudreau & O'Hara, 2008*)
- With one exception...
  - (*Beaudreau et al., 2017*)
- Older adults with better cognition use more adaptive coping strategies (*Kramer, et al., in preparation*)
- Older adults with poorer working memory show less emotion conflict adaptation (*Hantke et al., 2017*)
- Older adults with depression and passive suicidal ideation (SI) have poorer executive functioning than those with depression and no passive SI (*Jordan et al., 2020*)

# Prevalence of Late Life Mental Health Disorders

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Age of onset of 60+ years old for 1 in 4 older adults with a mood disorder and 1 in 2 older adults with an anxiety disorder

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Subsyndromal affective disorders in older adults:  
1 in 3 for anxiety and 1 in 7 for depression

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~1.8 million older Australians will have a mental health diagnosis of an affective disorder and/or dementia by 2057

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*Karel, Gatz, & Smyer, 2014 Amer Psychologist; Zhang et al., 2015 Translational Psychiatry; Devanad et al., 2004 J Affective Dis; Sajatovic et al., 2005 AJGP; Laborde-Lahoz et al., 2015 Int J Geriatr Psychiatry; [Older Australia at a glance, Demographics of older Australians - Australian Institute of Health and Welfare \(aihw.gov.au\)](#)*

# Empirical Support for Treatments for Persons with Some Cognitive Concerns or Dementia

## **PATH**

Problem Adaptation  
Therapy for Depression w/  
Cognitive Impairment

Kiosses et al., 2015 *JAMA Psychiatry*

## **Peace of Mind**

CBT for anxiety in  
dementia

*Paukert et al., 2010 Int Psychogeriatr*

## **Problem Solving Therapy for Depression w/ Executive Dysfunction**

*Alexopoulos et al., 2008 Int J  
Geriatric Psychiatry*

## **Cognitive Behavioral Therapy (CBT) for Anxiety in Parkinson's Disease**

*Dissanayaka et al., 2017  
Clin Gerontologist*

## **Problem Solving Training for Home Based Primary Care**

*Beaudreau et al., 2021a,b Int  
Psychogeriatrics, Clin Gerontologist*

## **CBT for Mood, Sleep Quality, Anxiety, Quality of Life in Cognitive Impairment- Review**

*Jin et al., 2021 Alzheimer Dis Assoc Disord*

# Common Themes from Treatments Developed for Older Adults with Cognitive Concerns

- Active role of care provider for reinforcing learning and practice
- Treatments fall under the umbrella of cognitive behavioral therapy
- Cognitive therapy de-emphasized or not existent (as with Problem-Solving Therapy)
- Behavioral emphasized
  - Emotion regulation skills through relaxation



# Late Life Cognitive Functioning and Mental Health Treatment Outcomes

## CBT for depression

- Poor cognitive flexibility = greater treatment response (*Goodkind, et al., 2016 IJGP*)

## Problem solving therapy or Supportive therapy for depression

- Slower set-shifting = more likely to have treatment response. (*Beaudreau et al., 2015, AJGP*)
- Inhibition improves with reduced depressive symptoms (*Mackin et al., 2014, AJGP*)

## Pharmacotherapy (escitalopram) for Generalized Anxiety Disorder

- Improved anxiety = improved inhibition & memory.
- Independent of anxiety improvement: Working memory, memory, and visuospatial ability improved in those with impaired baseline cognition (*Butters et al., 2011 British Journal of Psychiatry*)

## Pharmacotherapy (sertraline) for depression

- Slower speed of processing was associated with worse response (*Sheline et al., 2012, AJP*)

# Selecting and Adapting Mental Health Treatment Based on Cognitive Functioning

Do we need to  
adapt?

In some cases,  
maybe not if  
treatment outcome  
is optimal for those  
with specific types  
of neurocognitive  
impairments.

Selecting the  
treatment type

New  
treatment  
altogether?

Adapt the existing  
treatment

For e.g., poorer response for  
depression with executive  
dysfunction, better response to  
psychological treatments

*(Alexopoulos et al, 2005 Biological  
Psychiatry; 2000 Arch Gen Psychiatry)*

# Which Treatments to Deliver?



## Cognitive Training

- **Restorative**
- “Bottom up” processing
- Restore functioning of neural circuitry underlying impaired cognition
- **Compensatory**
  - “Top down” processing
  - Not intended to restore, but rather work around or compensate for cognitive impairment

(Adapted from slides from Dr. Twamley)



## Psychological Treatment

- Cognitive behavioral therapies (CBTs), including Problem solving therapy
- Standalone skills training or intervention such as relaxation training or behavioral activation alone
- Brief versions of CBT protocols as done in many Primary Care Mental Health Integration settings

# Conclusions

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Existing protocols for older adults with cognitive concerns suggest that behavioral interventions can be effective for reducing depression or anxiety

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Older adults with cognitive concerns but not a neurocognitive disorder might particularly benefit from these behavioral interventions

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Adaptations to existing mental health treatment protocols often support neurocognition (e.g., aids to remember materials, carer participation)

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With current pandemic, telemental health for delivery of treatments for older adults with cognitive concerns





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- *VA-STARS (VA/Stanford Research Group)*

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# Thank you for your attention

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