Late-Life Anxiety and Neurocognitive Impairment

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Updates on Dementia conference, “Mental Health Issues and Cognitive Impairment”
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Learning Objectives:

1. Describe the latest scientific evidence linking neurocognitive impairment with anxiety in older adults.

2. Summarize the evidence base for treating late-life anxiety in the presence of cognitive dysfunction.
Disclosures

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Views expressed in this presentation are those of the author and do not necessarily represent the views of the Department Of Veterans Affairs or the federal government.

Empirical Support
Linking Late-Life Anxiety & Neurocognitive Function

Why we should care about anxiety in older adults with neurocognitive issues
Poll: Which is the Most Common Mental Health Disorders in Older Adults?

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
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<tbody>
<tr>
<td>A. Alcohol and substance use</td>
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<td>B. Mood</td>
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<td>C. Anxiety</td>
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<td>D. Major Neurocognitive</td>
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<td>E. Both B &amp; C are equally common</td>
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Anxiety Disorders are Prevalent in Older Adults

![Bar chart showing prevalence rates](chart.png)

- **Any Psychiatric Disorder**: 8.5%
- **Anxiety Disorder**: 7%
- **Mood Disorder**: 2.6%
- **Substance Use Disorder**: 0%

*National Comorbidity Survey Replication*
Gum, King-Kallimanis, & Kohn, 2009

12-month prevalence (65+)*
Clinically Significant Anxiety Also in Older Adults across Settings

- 11.7% of older residential care patients (Creighton et al., 2017)
- 13% of community-dwelling multi-racial older adults (Cohen et al., 2006)
- 27% of older adults seeking home care management (Richardson et al., 2011)

What is Anxiety?

**Somatic/Physiological**
- Sensory, Muscular
- Cardiovascular
- Autonomic
- Gastrointestinal
- Genitourinary
- Respiratory
- Insomnia

**Anxiety Behaviors**
- Avoidance
- Repetitive behavior
- Reassurance seeking

**Cognitive & Affective**
- Worry, Concern
- Nervousness
- Irritability
- Fear
Late-Life Anxiety and Cognitive Impairment: A Review

Sherry A. Beaudreau, Ph.D., Ruth O’Hara, Ph.D.

Emerging research implicates a consistent reciprocal relationship between late-life anxiety and cognition. Understanding this relationship may clarify pathophysiological substrates of cognitive impairment and why co-occurring anxiety and cognitive impairment relates to poorer treatment prognosis for both conditions. This article critically reviews evidence of more prevalent anxiety in cognitively impaired older adults, elevated anxiety related to poorer cognitive performance, and more severe anxiety symptoms predicting future cognitive decline. It considers pathophysiological mediators and moderators, and the influence of comorbid depression or medical illness in anxiety. Identified directions for future research includes use of in-depth anxiety assessment comparing normal and mild cognitively impaired older adults and use of challenging neuropsychological tests to determine if specific cognitive domains suffer in anxious older adults. (Am J Geriatr Psychiatry 2008; 16:790–803)

Anxiety is a Common Neuropsychiatric Issue in Dementia

Late-Life Anxiety Associated with Multiple Risk Factors for Cognitive Dysfunction

Benzodiazepine use

Co-occurring depression

Multiple medical problems
Neuropsychiatric symptoms, apolipoprotein E gene, and risk of progression to cognitive impairment, no dementia and dementia: the Aging, Demographics, and Memory Study (ADAMS)

Sherry A. Beaudreau1,2, J. Kaci Fairchild1,2, Adam P. Spira1, Laura C. Lazzeroni1 and Ruth O’Hara1,2

Objective: To examine the relationship of neuropsychiatric symptoms and apolipoprotein E (APOE) ε4 allele status to dementia at baseline and progression to dementia in older adults with and without cognitive impairment, no dementia (CIND).

Methods: Adults (n = 856) 71 years and older (mean age = 79.15 years), 12.8% ethnic minority and 60.6% women, completed neuropsychological tests and APOE genotyping, and a proxy informant completed the Neuropsychiatric Inventory.

Results: After adjusting for age and education, neuropsychiatric symptoms and APOE ε4 were independently associated with CIND and dementia status at baseline (compared with cognitively normal). Further, neuropsychiatric symptoms predicted progression to dementia at 16- to 18-month follow-up among participants with CIND at baseline; the presence of these symptoms decreased the risk of progression from normal to CIND or dementia at 36 to 48 months.

Conclusion: Findings provide cross-sectional and longitudinal support for the role of neuropsychiatric symptoms in the prediction of cognitive impairment, particularly dementia. APOE ε4, although important, may be a less robust predictor. This investigation highlights the importance of behavioral symptoms, such as neuropsychiatric symptom status or frequency/severity, as predictors of future cognitive decline.

The Latest Evidence:

Elevated anxiety = 48% increase risk of dementia over 28 years

Petkus et al., 2016
Vignette: “Mr. Jones*”
*Not a real patient

**Demographics:** 70 yo male African American Vietnam Veteran, Married 41 years w/ 2 kids, 12 years education plus 1-2 years of electrical training

**Medical history:** Cardiovascular issues incl. heart attack 2 years ago, recent gastrointestinal complaints

**Medications:** Several for heart and blood pressure; benzodiazepine prn 5 months ago

**Referral:** Vet reports increasing problems with panic and “overthinking things” to the point he rarely leaves the house. Blames his inability to focus—“I start something and then get distracted by something else.” Wife reports he was always this way but now worse since her recent diagnosis of breast cancer (for which she is undergoing treatment). Mr. Jones calls the Primary Care clinic multiple times a week about “tightness in his chest” but when he has been advised to go to the E.R., the tests come back negative.

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**Poll: Is a Behavioral Treatment Appropriate for Mr. Jones?**

A. Yes, because cognitive issues appear mild.

B. Yes, but modified heavily and including a caregiver or other support,

C. Yes, and refer to primary care physician for medication consult.

D. No, but still refer to primary care physician for medication consult.

E. Any one of these options might be appropriate depending on additional information acquired during assessment, including patient and family treatment preferences.
Evidence Based Treatment Approaches for Late-Life Anxiety with Comorbid Cognitive Impairment

Best practices for treating late-life anxiety with cognitive dysfunction

Effects of Citalopram on Neuropsychiatric Symptoms in Alzheimer’s Dementia: Evidence From the CitAD Study

Anne K. Leonpacher, M.D., Matthew E. Peters, M.D., Lea T. Drye, Ph.D., Kelly M. Makino, B.S., Jeffery A. Newell, B.A., D.P. Devarand, M.D., Constantine Frangakis, Ph.D., Cynthia A. Munro, Ph.D., Jacobo E. Mintzer, M.D., Bruce G. Pollock, M.D., Ph.D., Paul B. Rosenberg, M.D., Lon S. Schneider, M.D., David M. Shade, J.D., Daniel Weintraub, M.D., Jerome Yesavage, M.D., Constantine G. Lyketsos, M.D., M.H.S., Anton P. Porsteinsson, M.D., for the CitAD Research Group

Older adults with Alzheimer’s disease are 43% less likely to have anxiety after 9 weeks of Citalopram compared with 9 weeks of Placebo.
Evidence Based Psychological Treatment Approaches for Anxiety with Cognitive Impairment: An Emerging Area

Cognitive behavioral therapy (CBT)

CBT for Anxiety in Dementia (Spector et al., 2015)

Peaceful Mind- CBT (dementia) (Stanley et al., 2012)

CBT for Parkinson’s (Dissanayaka et al., 2017)

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**Cognitive–behavioural therapy for anxiety in dementia: pilot randomised controlled trial**

Aimee Spector, Georgina Charlesworth, Michael King, Miles Lattimer, Susan Sadek, Louise Marston, Amritpal Rehill, Juanita Hoe, Aiffa Qazi, Martin Knapp and Martin Orrell

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**Phase 1**
- Patient-Carer dyads
- CBT rationale
- Self-monitoring

**Phase 2**
- Application of change processes
- Feeling safe
- Challenge unhelpful cognitions
- Calming statements
- Behavioral experiments

**Phase 3**
- End therapy
- “Blueprint for the future”
Elements of CBT for Anxiety in Persons with Minor or Major Neurocognitive Disorders

- Monitoring Symptoms
- Relaxation Skills (breathing)
- Pleasant Activities
- Sleep Hygiene
- Calming Thoughts (positive self-statements)


CBT for Parkinson’s Disease

- Psychoeducation
- Symptom monitoring
- Relaxation: deep breathing; & progressive muscle
- Relaxation and imagery
- Sleep hygiene
- Self-management and relapse prevention

6 sessions; caregivers actively participate.

Manual adapted from a CBT for anxiety in dementia manual

Improves both anxiety and Parkinson’s symptoms in patients!

And, less caregiver burden!

Other Evidence Based Psychological Treatments for Late-Life Anxiety with Cognitive Impairment

**Mindfulness Based Stress Reduction (MBSR)**
- Late-life anxiety or dep w/ cog complaints
- Improves worry, depression, memory, lowers cortisol
- Wetherell et al., 2017 *J Clin Psychiatry*

**Problem Solving Therapy (PST)**
- Works for depression with executive dysfunction- why not anxiety?
- Case series supports feasibility
- Beaudreau et al., manuscript accepted, *Cogn & Behav Prac*

**Exercise**
- Stretching vs. Cardio (PI: J. K. Fairchild)
- Benefits to anxiety and worry in persons with mild cognitive impairment?
- Beaudreau..., Fairchild, in preparation

**Treating Anxiety Could Also Improve Cognition**

- Escitalopram in late-life generalized anxiety disorder: improvements in inhibitory ability and memory (Butters et al. 2011)

- Mindfulness Based Stress Reduction led to improvements in memory recall (Wetherell et al. 2017)

- Improved stress coping will help with daily functioning when cognitive resources needed
  (Problem Solving Therapy has an edge? Research needed)
Conclusions

- Important to treat in older adults with cognitive dysfunction
- Stress management will benefit the patient regardless of whether it improves cognition
- Cognitive behavioral therapy for anxiety in dementia works!
  - medication not the only treatment option

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Thank you for your attention!
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