

The Silent Geriatric Giant: Anxiety Disorders in Late Life

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Late-life anxiety can often be “silent”—missed or difficult to diagnose as older adults tend to somatize psychiatric problems; have multiple psychiatric, medical, and medication issues; and present anxiety differently than do younger patients. Yet late-life anxiety disorders are a “geriatric giant,” being twice as prevalent as dementia among older adults, and four to eight times more prevalent than major depressive disorders, causing significant impact on the quality of life, morbidity, and mortality of older adults. Treatment of late-life anxiety is a challenge given concerns about medication side effects in older, frail, or medically ill patients. Antidepressants are recommended but not always tolerated, and benzodiazepines are generally to be avoided in this population. Effective psychotherapies such as cognitive behavioural therapy (CBT) are of particular interest for the older adult population, and the combination of CBT and medication is often needed to optimize treatment.

Key words: anxiety, late life, management, cognitive behavioural therapy

Introduction

Anxiety disorders have historically been considered a problem of childhood and early adulthood, with a peak onset between 18 and 40 years. Yet, anxiety disorders surpass the other well-known “geriatric giants” in their prevalence among older adults (10–20%), being twice as common as the dementias (8%) and four to eight times more prevalent than major depressive disorder (1–3%).¹ They are the most common psychiatric disorders throughout the lifespan.

Anxiety disorders are often “silent,” being difficult to diagnose or missed entirely. Of the five principal anxiety disorders, 90% of presentations of late-life anxiety are accounted for by either generalized anxiety disorder (GAD) or a specific phobia,² with GAD representing at least 50% of cases among older adults,³ of

which the majority are earlier-onset disorders with late-life exacerbations (50–97%).⁴ The remaining 10% of anxiety disorders are accounted for by obsessive-compulsive, post-traumatic stress, and panic disorders.

Associated cognitive aspects of underlying anxiety disorders include hypervigilance to threat, seeing oneself as vulnerable, and perceiving the demands of life as exceeding the available resources to cope.⁵ Older adults are at risk for anxiety disorders.⁵ Increasing frailty, medical illness, and losses can contribute to feelings of vulnerability and fear, and can reactivate anxiety disorders. A lack of social supports, a recent traumatic event, medical illnesses and medications, poor self-rated health, the presence of another psychiatric illness (particularly another anxiety disorder or depression), an early-onset anxiety disorder,

and female gender⁶ are all risk factors for late-life anxiety disorders.

Figure 1 presents areas of the brain affected by GAD.

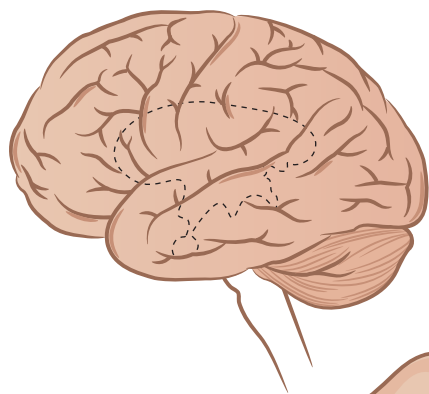
Impact of Late-Life Anxiety Disorders

Late-life anxiety has a significant impact in terms of health care costs because it is often comorbid with physical problems for older adults, leading to multiple investigations and hospitalizations. Anxiety disorders as a primary cause for hospitalization increase exponentially with age, as do health care costs related to anxiety disorders; the annual U.S. health care costs due to late-life anxiety disorders in 1990 was estimated to be \$42.3 billion.⁷ Anxiety disorders also result in high costs to patients in hospital and in the primary care setting as they are associated with increased depression, decreased quality of life, reduced perceptions of physical and mental health and vitality, greater physical disability, poor quality of life, increased comorbidity, and increased use of health services.⁸

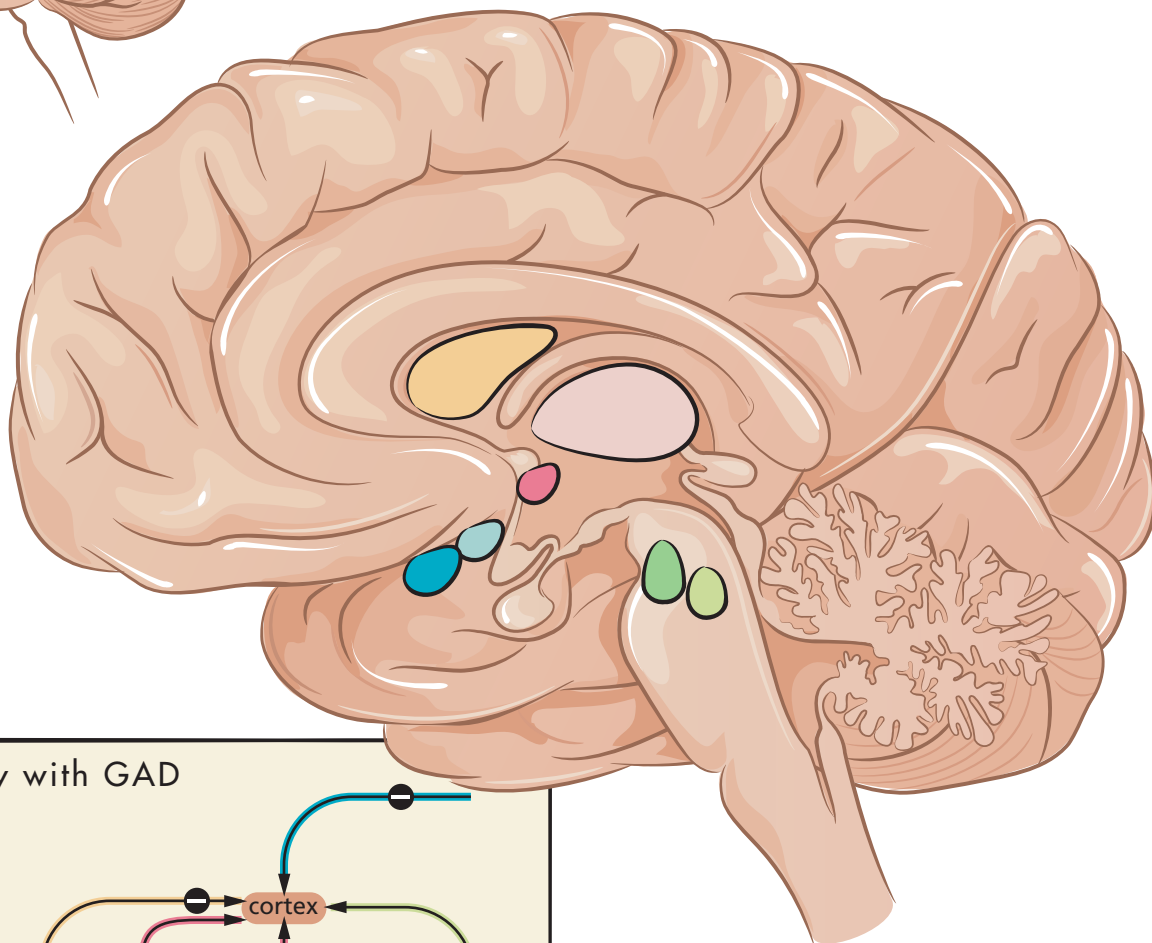
Diagnosing Anxiety Disorders in Late Life

Anxiety disorders can be challenging to diagnose in older adults because older individuals have a tendency to somatize psychiatric problems, and clinicians do not always include anxiety disorders in the differential diagnosis of their older patients. Unlike the solitary anxiety disorder seen in children and young adults, late-life anxiety is often comorbid with depression or medical illness, and there is substantial symptom overlap with depression (e.g., impaired sleep, concentration, attention, and memory; and agitation) and comorbid medical problems (including chest and abdominal pain, headaches, and shortness of breath). A good history taking is key to making the diagnosis, to determine if there is a new-onset presentation that might signify a comorbid depression, a medication- or substance-induced disorder, a new medical problem, or a recurrence of a previous disorder. Knowing the criteria for anxiety disorders is helpful, as well as

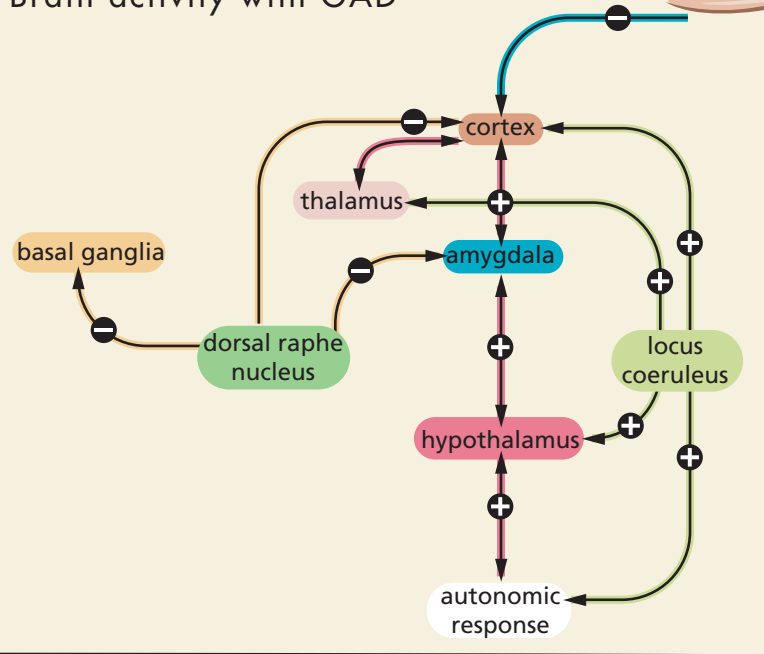
Figure 1:
Areas of the Brain Affected by Generalized Anxiety Disorder



Of the five principal anxiety disorders, 90% of late-life anxiety presentations are accounted for by either generalized anxiety disorder (GAD) or specific phobia (SP), with generalized anxiety disorder representing at least 50% of cases among older adults. GAD is exhibited in the brain as increased metabolic activity in the occipital, temporal, and frontal lobes, and in the cerebellum and thalamus during passive activity. During vigilant activity the basal ganglia are also involved.



Brain activity with GAD







-  lack of GABA inhibitory effect
-  excessive noradrenaline excitatory effect
-  putative pathway
-  lack of serotonin inhibitory effect

Table 1: Psychiatric Sources of Anxiety

Disorder (Symptom Summary)	Useful Screening Questions
Generalized anxiety disorder (diffuse constant anxiety and worry for >6 months)	Are you a worrier? Do you worry too much about the "what ifs" in life? Is it hard to stop the worrying? Does worrying keep you from falling asleep or feeling rested at night? Does your worry cause headaches, body aches, or tension?
Phobias	
Agoraphobia (fear of being trapped in a place from which escape might be difficult; anxiety might occur)	Are you afraid of being alone and unable to get help? Do you avoid doing things such as leaving your home because of this fear? Does a fear of falling stop you from doing things?
Social phobia (fear of social embarrassment)	Do you worry in social situations that people will judge you negatively? Do you avoid social situations because of that fear?
Specific phobia (fear of specific object or situation)	Do you fear anything specifically, such as animals, storms, or heights? Do you avoid being in situations where you might encounter this?
Panic disorder (episodic overwhelming anxiety and autonomic signs)	Do you have sudden, overwhelming body anxiety, with shortness of breath, sweating, or tightness in your chest lasting several minutes?
Post-traumatic stress disorder (traumatic event re-experienced, creating anxiety)	Do you have anxiety related to a trauma, causing you to have nightmares or flashbacks?
Obsessive-compulsive disorder (intrusive thoughts and repetitive behaviours)	Do you ever have a thought* or image that goes around in your mind like a "broken record" and is difficult to stop?
*The thought is not about "everyday worries," as in generalized anxiety disorder.	
Source: Adapted from Banazak D, 1997. ²⁷	

being aware of some of the differences seen in seniors. For a complete list of diagnostic criteria of all the anxiety disorders, see the *Diagnostic and Statistical Manual of Mental Disorders, Revised Fourth Edition*.⁹ A list of core features and suggested screening questions for the anxiety disorders is shown in Table 1. Useful anxiety assessment tools that have reliability for use with older adults are presented in Table 2.

Differences in Anxiety Disorder Presentations in Late Life

The most common disorder in late life is GAD, which is characterized by >6 months of worry about a number of life domains (e.g., relationships, finances, and health), difficulty in controlling the worry, and associated physical symptoms such as restlessness, fatigue, muscle

tension, and insomnia that interfere with social or occupational functioning. A new onset of GAD among older adults is often related to a depressive disorder. The combination of major depressive disorder and GAD has a worse prognosis overall, requiring 50% more time to respond to treatment and incomplete recovery from the depression.¹⁰

Specific phobias are characterized by persistent irrational fear of a situation, object, or activity and the desire to avoid the phobic situation. Among individuals over 65 years, agoraphobia is the most common of phobias, representing up to 80% of new-onset cases in late life¹¹; unlike agoraphobia in younger patients, in older adults it does not always occur with a concurrent panic disorder but can follow a traumatic event such as medical illness, mugging, or a fall.¹² The fear of falling is much more common among

older adults than in young patients, occurring in 30–77% of older adults who have fallen, and it is associated with becoming housebound, worsening depression, and the impediment of rehabilitation after a fall.¹³

Regarding the other three major anxiety disorders, panic disorder and obsessive compulsive disorder are more likely to appear among older adults who have a comorbid medical illness or dementia, and to have different clinical presentations than in younger individuals. Among older adults, panic may present with more shortness of breath but fewer physical symptoms overall. Older adults with obsessive compulsive disorder describe more themes of sins and religion than infections or contamination compared with younger persons; and in those with dementia, perseveration about toileting and medication schedules are

Table 2: Anxiety Scales

Gold standard scales (unclear validity for use in patients >65 years)	Structured Clinical Interview for DSM-IV (SCID) Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV)
Scales with geriatric norms	Hamilton Anxiety Rating Scale (score >20 = GAD) Fear Survey (screens for panic, phobia, GAD) Clinician-Administered PTSD Scale (CAPS) Yale-Brown Obsessive Compulsive Scale (Y-BOCS)

DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition; GAD = generalized anxiety disorder; PTSD = post-traumatic stress disorder.

Source: Carmin CN, et al., 2000.²⁸

common themes.¹⁴ Posttraumatic stress disorder is as likely to develop in older adults following a traumatic event as in younger patients, but there are cohort differences in experiences for older adults, such as the Holocaust and the World Wars. Traumatic memories may be reactivated by news of war and by personal losses, such as bereavement, diminished health, or retirement¹⁵ or in the context of dementia when short-term memory loss leads to increased rumination about past traumas.

Anxiety disorders are linked with increased morbidity and mortality among individuals who have medical illness, and the presence of medical illness increases the risk of anxiety disorders.¹⁶ Table 3 presents common medical issues related to anxiety in late life. Table 4 outlines some suggested investigations. Indi-

viduals with dementia who have anxiety often show their emotions indirectly through physical signs (tension, restlessness, fidgeting, agitation, sleep disturbance, wringing hands) and through their countenance (anxious or worried appearance).

Older adults are also more likely than younger adults to be taking multiple medications, some of which may cause or exacerbate anxiety disorders. A careful review of the list of medications is important in evaluating anxiety disorders among older adults, especially before prescribing additional medications for treatment (Table 5).

Treatment of Late-Life Anxiety Disorders

Research on pharmacological treatment of anxiety disorders in late life is sparse,

and guidelines are generally not based on randomized controlled trials of older adults but on extrapolation from research with younger age groups.¹⁷ Benzodiazepines are frequently overprescribed for older individuals with anxiety, often with serious side effects in this age group including cognitive impairment, rebound withdrawal symptoms, dependence, incontinence, and falls leading to hip fractures and fall-related death.¹⁸

The general principles for the use of medications for older adults are to start low and go slow but also aim high and treat long. These principles are especially useful in the treatment of older persons with anxiety, who worry about taking medications, are acutely aware of and sensitive to side effects, and have high dropout rates. Taking time to titrate, beginning with one-half or one-quarter

Table 3: Medical Conditions Associated with Late-Life Anxiety

System	Medical Conditions
Cardiovascular	Angina, arrhythmia, myocardial infarction, mitral valve prolapse, stroke
Endocrine	Diabetes mellitus, hypocalcemia, hyperthyroidism, pheochromocytoma
Gastrointestinal/genitourinary	Peptic ulcer disease, pancreatic cancer, urinary tract infection
Metabolic	Anemia, hypoglycemia, hyponatremia, hyperkalemia
Pulmonary	Chronic obstructive pulmonary disease, pneumonia, pulmonary embolism, hypoxemia
Neurological	Delirium, dementia, hearing and visual impairment, Parkinson's disease, seizure disorders, brain cancer, strategic strokes

Source: Adapted from Banazak D, 1997.²⁷

Table 4: Investigations for Late-life Anxiety Disorders

Complete blood count
Electrolyte levels
Thyroid-stimulating hormone level
Glucose level
Urinalysis
Pulse oximetry
Drug screening
Electrocardiography
Computerized tomography (head)

of the usual starting dose of an antidepressant and increasing slowly, with regular follow-up and reassurance, is often necessary for success. A summary of the evidence for various medications in treating anxiety disorders, based on mixed-age population studies, is provided in Table 6.

Some prospective controlled trials with older adults support the use of selective serotonin reuptake inhibitors for late-life anxiety, such as citalopram for GAD.¹⁹ There is also one meta-analysis of five controlled trials (136 subjects, 47 controls) that supports the use of the serotonin norepinephrine reuptake inhibitor venlafaxine for treating late-life GAD.²⁰

Table 5: Drugs Associated with Late-Life Anxiety

Category	Examples
Stimulants; sedative withdrawal	Caffeine, nicotine; benzodiazepine or alcohol withdrawal
Neurological/psychiatric	Antidepressants, levodopa, neuroleptics
Cardiovascular	Calcium channel blockers, alpha- and beta-blockers, digitalis
Endocrine	Estrogen, thyroid medication
Pulmonary	Bronchodilators, steroids, theophylline
Otolaryngeal	Antihistamine, pseudoephedrine
Musculoskeletal	Analgesics, muscle relaxants, nonsteroidal anti-inflammatory drugs

Source: Adapted from Banazak D, 1997.²⁷

There is evidence for the use of citalopram to treat anxiety in Alzheimer’s dementia,²¹ and cholinesterase inhibitors, such as donepezil²² and galantamine²³ have been shown to improve anxiety, irritability, or aberrant nighttime behaviour among persons with Alzheimer’s dementia.

Other medication options for late-life GAD include buspirone, trazodone, mirtazapine, atypical neuroleptics, and mood stabilizers such as topiramate, which are effective as augmentation strategies in younger persons with anxiety. Avoid the use of activating antide-

pressants such as bupropion and stimulants such as methylphenidate, which may worsen anxiety symptoms. If benzodiazepines are used, they should be used for a short term on regular intervals rather than as needed to avoid psychological dependence and withdrawal anxiety between doses.

Psychotherapeutic Interventions: Cognitive Behavioural Therapy

Cognitive behavioural therapy (CBT) is considered a gold standard treatment of anxiety disorders for children and young adults, and there is a growing body of evi-

Table 6: CANMAT Guidelines for the Pharmacological Treatment of Anxiety Disorders

	GAD	Phobia Disorder	PTSD	OCD	Panic Disorder
First line*	SSRI [†] , SNRI [†] , buspirone [†]	SSRI, RIMA	SSRI, TCA [‡]	SSRI [†] , TCA [‡]	SSRI [†] , SNRI
Second line	TCA	SNRI	SNRI, MAOI	SNRI, SARI	TCA
Third line/adjunct	Benzodiazepine	Benzodiazepine, MAOI	Benzodiazepine, divalproex, clonidine	Benzodiazepine, D2-blocker, gabapentin	Benzodiazepine, MAOI

CANMAT = Canadian Network for Mood and Anxiety Treatments; GAD = generalized anxiety disorder; MAOI = monoamine oxidase inhibitor; OCD = obsessive-compulsive disorder; PTSD = post-traumatic stress disorder; RIMA = reversible inhibitor of monoamine oxidase; SARI = serotonin antagonist/reuptake inhibitor; SNRI = serotonin norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor; TCA = tricyclic antidepressant.

*First line = level 1 evidence/tolerated based on mixed age studies.

[†]Some evidence in patients >65 years.

[‡]Recommended in younger adults, but side effects may limit use in patients >65 years.

Key Points


In primary care settings, generalized anxiety is the most common type of psychiatric disorder (>50%), followed by specific phobias together, they account for 90% of late-life anxiety disorders.

Diagnosis is difficult as comorbid psychiatric, medical, and medication issues are common; a good history taking is key to making the diagnosis.

Recommendations are to treat any underlying depression or medical illness, remove any offending agents, and avoid agents with autonomic/cognitive toxicities, risks of physical dependence, and drug interactions.

Benzodiazepines should be avoided among older adults due to an increased risk of adverse events. Selective serotonin reuptake inhibitors (SSRIs) are first-line agents for all five anxiety disorders, and serotonin norepinephrine reuptake inhibitors are indicated for generalized anxiety disorder.

Cognitive behavioural therapy is a gold standard treatment for anxiety disorders in younger patients, with proven efficacy in seniors in both individual and group formats, and is a useful alternative or medication adjunct that is often underused among the older adult population.

dence for its use among older adults.²⁴ Cognitive behavioural therapy has been shown to reduce benzodiazepine use, which, in turn, reduces the risk of falls and fall-related deaths in this age group. Historically, older adults have not been offered psychotherapy, possibly due to ageism; however, this is now changing. Of note, a recent development of “enhanced” models of CBT for older individuals, modified to better meet the needs of older adults by using large print and mnemonics to reinforce core concepts, have been shown to be more effective than standard CBT in an individual format²⁵ and also a group format.²⁶ In one recent study on an enhanced model of CBT for older adults delivered in a group format, we found moderate to large effect size reductions in depression and anxiety scores and improved scores on perceived quality of life among older persons with mixed anxiety and depressive disorders.²⁶ Cognitive behavioural therapy treatment of anxiety disorders is based on behavioural exposure to anxiety-provoking situations, reducing escape and avoidance behaviours, and cognitively restructuring appraisals and beliefs that increase fear. For many people, a combination of CBT and antidepressant medications is necessary for optimal management. 

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Anxiety Disorders

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