GAI
Geriatric Anxiety Inventory

# 2011 GAI Update

There has been a growing interest in the cross-cultural adaptation of instruments for assessment of anxiety, but studies involving anxiety specifically in the geriatric population is still unusual. There is currently a lack of instruments designed properly diagnose and assess this population. Translation and cultural adaptation is the first step to providing comparisons between different cultural contexts.

The introduction of the Geriatric Anxiety Inventory and its variations has made an impact on assessment of anxiety research internationally, demonstrating global interest in the topic of late-life anxiety.

Presently GAI has been translated into over two dozen languages and used in at least 20 countries across the world, across six continents. Care has been taken with such translations both to maximize utility, reliability and validity across languages and cultures, as well as to ensure response formats are consistent and understandable.

The year of 2011 has been peppered with publications releasing new information of the psychometric validation of the GAI and transcultural adaptations. Take a moment to read some of the updates from 2011

Pachana, N.A. & Byrne, G.J.A. (in press). The Geriatric Anxiety Inventory: International use and future directions. Australian Psychologist

## The Current Climate

In Australia, the rapid ageing population (over 65) is set to increase to an enourmous 25% of the total population by 2051. This affects both the developed and the developing world and has implications for health care. Mental health care is particulalry vulnerable with a predicted shortages of clinicians across disciplines with expertise in ageing.

Anxiety itself is a common and often under-diagnosed and untreated disorder. For older adults with either a primary or co-morbid anxiety disorder, the contribution to overall burden of disease is significant. This is a tragedy as proper diagnosis and development of treatment plans would aid in avoiding the current excess in morbidity and mortality.

An identified way to reduce excess burden and instigate appropriate treatments for older adults with anxiety is to improve assessment for anxiety across diagnoses and settings. This is one of the key goals of the GAI.

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# New Australian Research

## Alzheimer's Association Study Assessing GAI in Older Adults without Dementia

A study funded by an Alzheimer's Association New Investigator Research Grant is underway assessing anxiety using the GAI with older adults in Palo Alto, California, USA. The protocol title is "Impact of Anxiety and Depressive Symptoms on Cognitive Impairment." This study was designed to determine if anxiety and depressive symptoms predict cognitive performance at one-year follow-up in older community-dwelling adults with no cognitive impairment or mild cognitive impairment. Participants with dementia based on a positive screen were excluded.

Postdoctoral Fellow, Dr. Christine Gould from the Geriatric Research Education and Clinical Centers at the combat Veterans hospital in Palo Alto, is taking the lead in validating the 20-item GAI for use in older Americans without dementia. She will examine its psychometric properties and compare the GAI with other anxiety, depression, and worry measures to establish convergent and discriminant validity. The clinical cutoff determined by Pachana and colleagues (2006) will be examined in our American sample. Her research preceptor, Dr. Sherry A. Beaudreau, a Health Science Specialist and Clinical Assistant Professor at Stanford University School of Medicine, is overseeing Dr. Gould's GAI validation study. Dr. Gould's pilot study will form the basis for a career development award focused on improving anxiety screening of combat Veterans in this national healthcare setting.

Data collection with the GAI is currently underway with a projected sample size of 90 among participants aged 65 to 91-years old. Participants include Individuals with no current psychiatric diagnosis, past psychiatric diagnoses of anxiety and depression, and a smaller subset of individuals with current diagnoses of anxiety and depression.

The in-depth psychiatric and cognitive assessments will provide rich data from which to validate the GAI and to determine if it is particularly useful among specific subgroups of older adults (e.g., those with mild cognitive impairment vs. no impairment).

## New Measure in Development

There is a need for a very brief self-report scale to measure anxiety symptoms in epidemiological surveys, in primary care and in acute geriatric medical settings. To this effect, the GAI Short Form (GAI-SF) was developed ith high Internal consistency (Cronbach's $\alpha = 0.81$) and sound concurrent validity against the State-Trait Anxiety Inventory ($rs = 0.48$, $p < 0.001$).

In addition., an informant version of the GAI for use in persons with dementia is in development. The Informant Questionnaire for Anxiety in Dementia (IQAD) has been developed based on the ten most robust items from the GAI. These have been field tested in various smaller cohorts; a large field trial is currently under way.

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# International Translations and Publications

## Spanish GAI: Psychometric properties

The psychometric properties and associations between anxiety and other variables related to emotional distress and emotion regulation, experiential avoidance, and emotion suppression was explored. Three hundred and two older adults beyond the age of 60 were involved.

Half of the variance was explained by three factors and internal consistency for the total scale was 0.91, with alphas ranging between 0.71 and 0.89 for the factors. Significant associations between all the GAI factors, the GAI total score, and depression, rumination, and experiential avoidance were found (all $p < 0.01$).

Women (65% of the sample) reported higher scores than men for both the GAI total score and for all of the subscales. However, no significant gender differences were found between people with scores higher than the cut-off score for the GAI. The results of this study demonstrated sound psychometric properties of the Spanish GAI.

Márquez-González, M., Losada, A., Fernández-Fernández, & Pachana, N.A. (in press). Psychometric properties of the Spanish version of the Geriatric Anxiety Inventory. International Pychogeriatrics

## Portuguese GAI: Transcultural adaptation and psychometrics

The Portuguese version of the GAI was examined and the psychometric properties examined. A cross-sectional study involving 152 older adults over the age of 55. Fifty-five individuals from a geriatric psychiatric sample of outpatients and individuals with clinical diagnoses of depression, anxiety and early Alzheimer's were also recruited.

Linguistic and transcultutal adaptations were performed on the scale. Following this, sound internal consistency and good concurrent validity was established against the Spielbeg State-Trait Anxiety Inventory, the Geriatric Depression Scale and the General Health Questionnaire.

A cut-off of 8/9 was determined for severe anxiety symptoms but not for generalised anxiety. The results of this study demonstrated sound psychometric properties of the portuguese GAI.

Ribeiro O, Paúl C, Simões MR, Firmino H. (2011). Portuguese version of the Geriatric Anxiety Inventory: transcultural adaptation and psychometric validation. Aging & Mental Health, 15(6):742-8.


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# Attitudes and beliefs of advanced care planning in Singaporeans with early dementia

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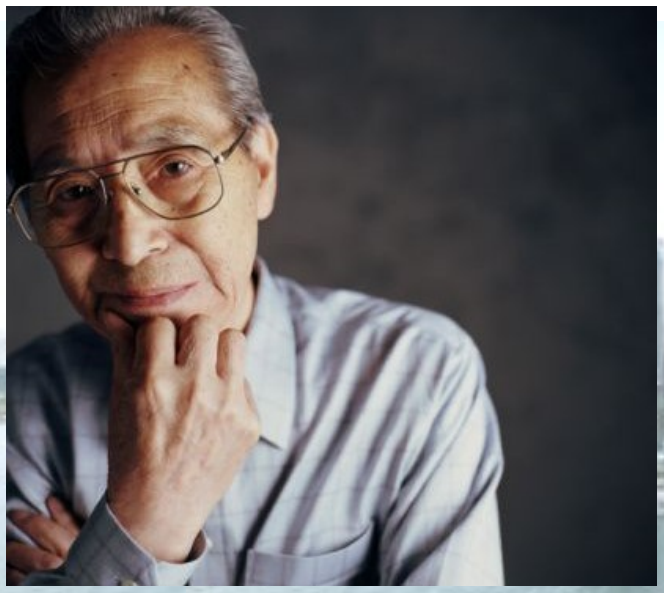
The rapid aging of the world's population has prompted the creation of strategies and policies to deal with increasing issues of medical care and personal welfare. Following its counterparts, Singapore advocated advance care planning as a strategy to allow those at risk to start thinking about their preferences and goals of care based on his values and beliefs, and communicating their wishes as a strategy to improve personal welfare and care.

This prompted the "lasting power of attorney" policy to be included in the Singapore Mental Capacity Act in March 2010. There is no research currently within the local context examining how persons with dementia respond towards this act and the reasons for their reactions.

This study aims to examine the relationship between the attitudes and beliefs, and the willingness to engage in advanced care planning in a group of patients with mild cognitive impairment or early dementia. Attitudes and beliefs are assessed through responses to a modified version of the perceived barriers and benefits scale. Patient's characteristics that could have an impact on their decision making are also examined through the use of scales screening for their cognitive abilities, anxiety and depression symptoms and medical insight.

The short-form Geriatric Anxiety Inventory has been chosen as a measure for anxiety symptoms due to its ease and time-efficiency of usage, and its appropriateness for the geriatric population in our study.



# International Research Using the GAI

## Cognitive Behavioral Therapy uses the GAI to assess late-life anxiety

Diefenbach and colleagues (2009) examined the efficacy of cognitive-behavioral therapy (CBT) for late-life anxiety. The authors describe their home-based CBT program developed specifically for late-life anxiety, outlining their experience partnering with a community care management organization.

The GAI was demonstrated to be useful in showing change in participants who completed the treatment. Two case examples are used to illustrate the multiple barriers to achieving successful treatment outcomes with this population, and emphasizing the need for future research efforts with respect to treatments tailored for older adults experiencing anxiety Here again, instruments which can successfully document change after interentions are needed.

## Experiential Avoidance, health and Anxiety

Andrew & Dulin (2007) examined the influence of experiential avoidance (EA) as a moderating variable between reported physical health problems and anxiety and depression among older adults. The GAI, the GDS, and the Acceptance and Action Questionnaire (AAQ) measure of EA were administered to 208 individuals between 70 and 92 years.

Data suggested that EA explained 8% of the unique variance in depression, 20% in anxiety and moderated the relationships between self-reported health and both depression and anxiety. This study also found that relationships involving EA were more pronounced with anxiety as compared with depression, thus pointing to EA as an important consideration when studying self-reported health and anxiety in particular in older populations.

## Anxiety in Cardiac Patients

Paukert and colleagues (2009) examined 104 older veterans over age 60 with heart failure to determine the relative importance of demographic, physical and psychiatric parameters and various aspects of coping in predicting depressive symptoms in this group.

The GDS and GAI were used to screen for depression and anxiety respectively, such that the final sample consisted of equal numbers with and without significant levels of anxiety and depression. Correlational analyses indicated that depressive symptoms were more significantly associated with various poor outcomes from heart failure (e.g. physical limitations and maladaptive coping), than were symptoms of anxiety.

## GAI used to assess anxiety in amulatory heart failure patients

Cully and colleagues (2009) found prevalence of depression (as defined by GDS score >/= 6) was 41.8%, and prevalence of anxiety (as defined by GAI score >/= 9) was 25.3%.

Of their 158 patients with a positive GDS or GAI result, 57.5% had a diagnosis or medical-record notation for depression and/or anxiety in their chart. However, 60.3% of those with a recognised psychiatric syndrome received mental health treatment during the 18-month period of the study. It was noted that once depression and/or anxiety was documented in the medical record, patients were highly likely to receive mental health treatment. This again underscores the importance of having specific instruments to detect anxiety in older clinical populations of interest.