Development and initial validation of a self-report assessment tool for anxiety among older adults: The Geriatric Anxiety Scale

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ABSTRACT

Anxiety is a common experience among older adults and can be a cause for major clinical concern. Brief and psychometrically sound screening instruments are needed to detect anxiety in later life. The purposes of this study were to develop a brief, self-report measure of anxiety for use with older adults (called the Geriatric Anxiety Scale [GAS]) and to report on its preliminary psychometrics. The GAS includes 30 self-report items of which 25 items represent three common domains of anxiety symptoms among older adults (cognitive, somatic, and affective) and 5 items represent common content areas of worry. The GAS total score and subscale scores demonstrated good internal reliability in community dwelling and in clinical samples. In addition, correlation analyses provided solid evidence of convergent and construct validity for the GAS in both samples. Present results support the preliminary validity of the GAS for clinical and research purposes. We conclude with a discussion of limitations and future research topics.

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Anxiety is a widespread problem among older adults and is cause for major clinical concern. Whereas there is a large literature on depression in later life, the knowledge base about anxiety in the older adult populations is much less developed. This is unfortunate especially because anxiety disorders are, in fact, more common than depression in older adults with prevalence estimates ranging from 3% to 14% (Bryant, Jackson, & Ames, 2008; Wolitzky-Taylor, Castriotta, Lenze, Stanley, & Craske, 2010). The rate is much higher in clinical samples of older adults, ranging from 15% to 56% (Bryant et al., 2008). Anxiety is associated with many challenges including decreased physical activity, poor self-perceptions of health, decreased life satisfaction, increased loneliness, and worse health-related quality of life compared to asymptomatic individuals (e.g., de Beurs, van Balkom, Lange, Koele, & van Dyck, 1999; Fuentes & Cox, 2000; Wetherell et al., 2004).

Wolitzky-Taylor et al. (2010) recently highlighted several barriers to the accurate screening and assessment of anxiety among older adults, most notably the high rates of medical comorbidity and higher rates of cognitive impairment among older adults, and changes in life circumstances not faced by younger adults. The issue of the medical comorbidity is especially problematic because anxiety may be presented as physical symptoms for some older adults. Indeed, older adults may be likely to attribute physical symptoms related to anxiety to medical issues, including muscle tension, hypervigilance, and difficulties related to sleep (Kogan, Edelstein, & McKee, 2000). In turn, many physical conditions (e.g., cardiovascular disease, respiratory disease, hyperthyroidism, and pulmonary and vestibular difficulties) can mimic symptoms of anxiety, making it difficult to disentangle the symptoms of anxiety from the symptoms of medical illnesses (Alwahhabi, 2003; Kogan et al., 2000). Another problem in the diagnosis of anxiety in older adults lies in the high rate of comorbidity of anxiety and other psychiatric problems, including depression (Beekman et al., 2000; Kim, Braun, & Kunik, 2001; King-Kallimanis, Gum, & Kohn, 2009; Lenze et al., 2000), personality disorders (Coolidge, Segal, Hook, & Stewart, 2000), and substance abuse (Chou, 2009a; Chou, 2009b; Fingerhood, 2000). Moreover, anxiety symptoms are known to be particularly difficult for older adults to identify correctly compared to younger adults (Wetherell et al., 2009).

Some anxiety screening measures that were developed for use with younger adults have been validated among older adults, although *elder-specific* assessment measures are preferable (Edelstein & Segal, in press; Edelstein et al., 2008; Stanley & Beck, 2000). One such measure is the Adult Manifest Anxiety Scale-Elderly Version (AMAS-E; Reynolds, Richmond, & Lowe, 2003) which includes three subscales derived from factor analysis: worry/stress, fear of aging, and physiological symptoms (Lowe & Reynolds, 2000). Although the AMAS-E has many strengths, some weaknesses are that the factors are derived solely from factor analysis, the response format does not capture subtle variations (forced true/false for each item) and it has a limited research base. The Geriatric Anxiety Inventory (GAI; Pachana et al., 2007) is a promising

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new measure that consist of 20 items that can be administered in self-report format or nurse-administered format, with a simple agree/disagree response format. The GAI has demonstrated sound psychometric properties with older adults and it effectively discriminated between those with and without any anxiety disorder and between those with and without generalized anxiety disorder. However, one potential weakness of the GAI is that there appears to be a strong emphasis on the experience of worry as a prominent symptom.

The purposes of this study, therefore, were to develop a brief, self-report screening measure of anxiety for use with older adults (called the Geriatric Anxiety Scale [GAS]) and to report on its preliminary psychometrics. Our intent was to develop a measure that covers three common domains of anxiety symptoms among older adults, including (1) somatic symptoms, (2) cognitive symptoms, and (3) affective symptoms. Indeed, these three components or domains of excessive anxiety are hallmarks of anxiety and are commonly assessed during a thorough clinical evaluation of anxiety (Segal, Qualls, & Smyer, in press). The GAS is also potentially unique in that the items for the measure were crafted from the full range of anxiety disorder symptoms as delineated in the anxiety disorders section of the *Diagnostic and statistical manual of mental disorders* (*DSM-IV-TR*; American Psychiatric Association, 2000). Neither the AMAS-E nor the GAI are measures of specific *DSM*-based symptoms. The GAS was developed and validated in three phases. First, we generated a large number of potential scale items and then we determined which items were most heavily endorsed by older adults, which items were endorsed more by older adults than younger adults, and which items improved internal consistency of the measure. Second, we evaluated the psychometric properties of the new measure in a sample of community-dwelling older adults. Third, we assessed the psychometric properties of the new measure in an outpatient clinical sample.

1. Study 1: item development

1.1. Method

1.1.1. Participants and procedure

The younger adult group consisted of 100 participants (*M* age = 24.0 years, range = 17–49 years; 83% female) recruited from classes. The older adult group consisted of 30 participants (*M* age = 67.0 years, range = 60–82 years; 70% female) recruited by student family members. The proportion of women in the two age groups was not significantly different χ^2 (1, *N* = 130) = 2.44, *p* = .12. Each participant anonymously completed the questionnaire packet.

1.1.2. Instrument

During this phase, a broad-spectrum self-report anxiety symptom questionnaire was developed. Our approach was to construct an item for each unique symptom of anxiety based on the formal diagnostic criteria for the anxiety disorders in the *DSM-IV-TR*, which resulted in an initial questionnaire of 57 items. Next, participants were prompted to think of the last time they experienced significant anxiety and to write down the specific event or situation. Respondents then rated the degree to which each symptom applied to them during the identified episode. Each symptom is rated on a 4-point scale ranging from 0 (*not at all*) to 3 (*all of the time*), with higher scores corresponding to higher levels of anxiety.

1.2. Results and discussion

The initial goal was to discover which items were most appropriate to include in the first version of the GAS. To determine which items of the anxiety symptom questionnaire were most heavily

Table 1
GAS subscales and their items.

Subscale	Item #	Item
Somatic	1	My heart raced or beat strongly.
Somatic	2	My breath was short.
Somatic	3	I had an upset stomach.
Somatic	8	I had difficulty falling asleep.
Somatic	9	I had difficulty staying asleep.
Somatic	17	I had a hard time sitting still.
Somatic	21	I felt tired.
Somatic	22	My muscles were tense.
Somatic	23	I had back pain, neck pain, or muscle cramps.
Cognitive	4	I felt like things were not real or like I was outside of myself.
Cognitive	5	I felt like I was losing control.
Cognitive	12	I had difficulty concentrating.
Cognitive	16	I felt like I was in a daze.
Cognitive	18	I worried too much.
Cognitive	19	I could not control my worry.
Cognitive	24	I felt like I had no control over my life.
Cognitive	25	I felt like something terrible was going to happen to me.
Affective	6	I was afraid of being judged by others.
Affective	7	I was afraid of being humiliated or embarrassed.
Affective	10	I was irritable.
Affective	11	I had outbursts of anger.
Affective	13	I was easily startled or upset.
Affective	14	I was less interested in doing something I typically enjoy.
Affective	15	I felt detached or isolated from others.
Affective	20	I felt restless, keyed up, or on edge.

Total score = sum of items 1 through 25. Somatic subscale (9 items) = sum of items 1, 2, 3, 8, 9, 17, 21, 22, 23. Cognitive subscale (8 items) = sum of items 4, 5, 12, 16, 18, 19, 24, 25. Affective subscale (8 items) = sum of items 6, 7, 10, 11, 13, 14, 15, 20.

endorsed by the older adults, we calculated the mean score for each item and then ranked each item. The 30 items with the highest ranking means were included in the first version of the GAS. To determine which items were endorsed more by older adults than younger adults, *t*-tests were performed on the mean responses for each item on the questionnaire for younger and older adults. At this step, only one additional item (which was not already in the top thirty items based on older adult response frequencies) was added to the draft version of the GAS. Thus, 31 symptom items were identified at this stage.

Next, each symptom question on the GAS was identified based on item content to load on one of the three theoretically derived subscales: Somatic, Cognitive, and Affective. In the final item development and refinement phase, each item was examined for its item-total correlation and impact on internal consistency of the three subscales. At this step, 6 items were eliminated resulting in a final measure of 25 items measuring diverse anxiety symptoms. Finally, 5 content items were added to the end of the GAS. These items assess areas of anxiety often reported to be of concern for older adults, including finances, health, one's children, fear of dying, and fear of becoming a burden to family members. However, these content specific items are not part of the total score of the GAS (since they are not anxiety symptoms as per the *DSM*), but they can be used to help clinicians identify specific areas of anxiety for a client. Thus, the final draft GAS included 30 items (25 symptoms and 5 content areas). The GAS subscales and their items are presented in Table 1. As can be seen in the table, there are 9 items on the Somatic subscale, 8 items on the Cognitive subscale, and 8 items on the Affective subscale. The response format consists of a 4-point Likert-type scale ranging from 0 (*not at all*) to 3 (*all of the time*) which allows for dimensional ratings of anxiety symptoms and avoids the problems of a yes/no response format which may not adequately

apply to some items for some respondents. Respondents are asked to rate each item based on how they have felt in the past week, including today. Most respondents complete the measure in less than 10 min.

2. Study 2: preliminary psychometrics in a community sample

2.1. Method

2.1.1. Participants and procedure

A community dwelling sample of 101 older adults (M age = 72 years, range 60–90 years, 61% female, 92% European-American) anonymously completed the GAS as well as several other measures of anxiety and depression to gather preliminary psychometric data for the GAS with a normative, community-dwelling older sample. The measures used for validation included the Geriatric Depression Scale, State-Trait Anxiety Inventory, Beck Anxiety Inventory, and AMAS-E.

2.2. Measures

Geriatric Anxiety Scale (GAS). The GAS is a 30-item self-report measure used to screen for anxiety symptoms among older adults. Individuals are asked to indicate how often they have experienced each symptom in the last week including today. Respondents answer using a 4-point Likert scale ranging from 0 (*not at all*) to 3 (*all of the time*), with higher scores indicating higher levels of anxiety. The GAS includes three subscales: somatic symptoms, cognitive symptoms, and affective symptoms. The number of items for each subscale ranges from 8 to 9. The GAS total score is based on the first 25 items. The additional 5 content items assess areas of anxiety often reported to be of concern for older adults. These items are to be used clinically and as such they do not load on the total score of the GAS.

Geriatric Depression Scale (GDS; Yesavage et al., 1983). The GDS is a self-report measure consisting of 30 dichotomous (yes/no) questions that assess current depressive symptoms, with higher scores indicating higher depression. The GDS has excellent psychometric properties and is one of the most widely used depression screening measure with diverse older adult populations (Hanson et al., 2004; Marty et al., in press).

State-Trait Anxiety Inventory (STAI; Spielberger, 1983). The STAI is a 40-item self-report Likert scale that assesses separate dimensions of "state" anxiety (items 1–20) and "trait" anxiety (items 21–40). Each item is rated on a 4-point intensity scale with higher scores denoting higher levels of anxiety. The STAI is widely used in studies of anxiety in the general adult population, but has mixed evidence for support among older adults (e.g., Kabacoff, Segal, Hersen, & Van Hasselt, 1997).

Beck Anxiety Inventory (BAI; Beck & Steer, 1990). The BAI is a 21-item self-report Likert scale measuring common symptoms of clinical anxiety, such as nervousness and fear of losing control. Respondents indicate the degree to which each symptom bothers them. Each symptom is rated on a 4-point scale ranging from 0 (*not at all*) to 3 (*severely, I could barely stand it*). Total scores can range from 0 to 63, with higher scores corresponding to higher levels of anxiety. The BAI has solid psychometric properties with adult populations, as well as some psychometric support for use with older adults (e.g., Kabacoff et al., 1997; Wetherell & Gatz, 2005).

Adult Manifest Anxiety Scale-Elderly Version (AMAS-E; Reynolds et al., 2003). The AMAS-E is a 46-item true-false self-report questionnaire measuring a total score and three dimensions of aging: worry/stress, fear of aging, and physiological symptoms of anxiety. The internal consistency estimates for the AMAS-E's three anxiety

Table 2
The GAS interscale correlations in the community sample and in the clinical sample.

	Cognitive subscale	Somatic subscale	Affective subscale
Community sample (N = 101)			
GAS total	.91[*]	.86[*]	.92[*]
Cognitive subscale		.61[*]	.82[*]
Somatic subscale			.66[*]
Clinical sample (N = 69)			
GAS total	.91[*]	.91[*]	.91[*]
Cognitive subscale		.71[*]	.79[*]
Somatic subscale			.73[*]

[*] p < .01.

Table 3
Convergent validity correlations among the community sample of older adults.

	GAS total	Cognitive subscale	Somatic subscale	Affective subscale
GDS total	.78[*]	.82[*]	.53[*]	.75[*]
STAI-Trait total	.79[*]	.81[*]	.57[*]	.75[*]
STAI-State total	.74[*]	.78[*]	.50[*]	.71[*]
BAI total	.82[*]	.79[*]	.70[*]	.76[*]
AMAS total	.77[*]	.74[*]	.65[*]	.69[*]
AMAS worry subscale	.76[*]	.75[*]	.62[*]	.67[*]
AMAS physiological subscale	.65[*]	.65[*]	.54[*]	.55[*]
AMAS fear of aging subscale	.46[*]	.40[*]	.44[*]	.39[*]

[*] p < .01.

scales were good, ranging from .71 to .91 (Reynolds et al., 2003). The AMAS-E demonstrates adequate internal consistency and temporal stability. Preliminary evidence for construct validity and discriminant validity appears promising, although limited research has been conducted on this instrument.

2.3. Results and discussion

Descriptive data. Mean scores and standard deviations for the GAS and its subscales are as follows: GAS total score (M = 13.65, SD = 9.70), Cognitive subscale (M = 3.13, SD = 3.75), Somatic subscale (M = 6.44, SD = 3.87), and Affective subscale (M = 3.98, SD = 3.20).

Internal scale reliabilities. Among the community-dwelling older adults, internal consistency reliability for the GAS total score was excellent (α = .93) whereas internal consistency estimates for the subscales were good to excellent (Cognitive α = .90; Somatic α = .80; Affective α = .82).

Validity. To assess construct and convergent validity, relationships between the GAS total, its subscales, and all other measures were investigated using correlation coefficients. Regarding interscale correlations, as expected, there were strong positive relationships (all p's < .01) between the GAS total score and each of the GAS subscales (Cognitive r = .91; Somatic r = .86; Affective r = .92) (see Table 2). Additionally each subscale was significantly positively correlated (p < .01) with the other subscales, ranging from r = .61 (Cognitive subscale with Somatic subscale) to r = .82 (Cognitive subscale with Affective subscale) (see Table 2). These data indicate that the subscales share common variance ranging from 37% to 67%.

Next, validity coefficients comparing the GAS scale and subscale scores and the other measures (GDS, BAI, STAI, AMAS-E) were calculated. These results are presented in Table 3. The GAS total score and each of the subscales were significantly correlated (p < .01) with the GDS (GAS total r = .78; Cognitive r = .82; Somatic r = .53; Affective r = .75), the STAI-Trait scale (GAS total r = .79; Cognitive r = .81; Somatic r = .57; Affective r = .75), the STAI-State scale (GAS total r = .74; Cognitive r = .78; Somatic r = .50; Affective r = .71), the BAI (GAS total r = .82; Cognitive r = .79; Somatic r = .70; Affective

Table 4
Convergent and divergent validity correlations among the clinical sample of older adults.

	GAS total	Cognitive subscale	Somatic subscale	Affective subscale
GDS total	.73[*]	.67[*]	.63[*]	.72[*]
Global Assessment of Functioning score	−.39[*]	−.38[*]	−.34[*]	−.37[*]
Years of education	−.01	−.10	.01	.06

[*] $p < .01$.

$r = .76$), and the AMAS-E total (GAS total $r = .77$; Cognitive $r = .74$; Somatic $r = .65$; Affective $r = .69$). These correlations typically indicated medium to large effect sizes.

It appears, at least preliminarily, that the GAS has adequate psychometric properties among community-dwelling older adults. The findings suggest that the GAS total score and subscale scores have good to excellent internal consistency reliability. The correlations among subscales of the GAS in this sample were all moderate to high, as expected, but they were not redundant suggesting that each subscale measures a different aspect of anxiety. Finally, the results provide solid evidence of convergent validity based on the pattern of correlations between the GAS and other existing measures of anxiety, although the correlation with a measure of depression was equally robust.

3. Study 3: preliminary psychometrics in a clinical sample

3.1. Method

3.1.1. Participants, procedure, and method

A clinical sample of 69 older adults (M age = 69 years, range = 60–87 years, 78% female, 91% European-American) seeking outpatient psychological services at a community-based mental health clinic for older adults also completed the GAS and GDS as part of a routine screening of all clients. Participants in this sample were predominantly seeking treatment for caregiver-related concerns and for diverse depressive and anxiety symptoms. The Global Assessment of Functioning (GAF; from *DSM-IV-TR* Axis V) scale scores for this sample showed a modest level of impairment on average (GAF $M = 67$; range = 50–85).

3.2. Results and discussion

Descriptive data. Mean scores and standard deviations for the GAS and its subscales in this clinical sample are as follows: GAS total score ($M = 20.75$, $SD = 10.73$), Cognitive subscale ($M = 5.94$, $SD = 3.89$), Somatic subscale ($M = 8.59$, $SD = 4.28$), and Affective subscale ($M = 6.21$, $SD = 3.45$).

Internal scale reliabilities. Among the clinical sample, internal consistency reliability for the total GAS was excellent ($\alpha = .93$) whereas internal consistency estimates for the three subscales were good (Cognitive $\alpha = .85$; Somatic $\alpha = .80$; Affective $\alpha = .82$).

Validity. To assess convergent validity, correlations were computed between the GAS total score, the GAS subscales, and the GDS. Results for interscale relationships are shown in Table 2. As expected, results showed strong positive relationships (all p's < .01) between the GAS total score and each of the GAS subscales (Cognitive $r = .91$; Somatic $r = .91$; Affective $r = .91$). Additionally each subscale was significantly positively correlated ($p < .01$) with the other subscales, ranging from $r = .71$ (Cognitive subscale with Somatic subscale) to $r = .79$ (Cognitive subscale with Affective subscale) (see Table 2). These data indicate that the subscales share common variance ranging from 50% to 62%.

Next, validity coefficients comparing the GAS scale and subscale scores and the other measures (GDS, GAF, years of education) were calculated. These results are shown in Table 4. The GAS total score

and each of the subscales were significantly positively correlated ($p < .01$) with the GDS (GAS total $r = .73$; Cognitive $r = .67$; Somatic $r = .63$; Affective $r = .72$). Relationships between the GAS total score and the subscales with GAF scale scores were assessed, predicting an inverse relationship. Indeed, significant inverse relationships ($p < .01$) were found (GAS total $r = −.39$; Cognitive $r = −.38$; Somatic $r = −.34$; Affective $r = −.37$). To determine discriminant validity, the relationship of the GAS total and subscales with years of education were assessed. As expected, neither the GAS total score nor the subscales significantly correlated with education (GAS total $r = −.01$, Cognitive $r = −.10$; Somatic $r = .01$; Affective $r = .06$).

These results suggest that the GAS has adequate psychometric properties among a clinical sample of older adults receiving outpatient psychotherapy services. The findings indicate that the GAS total score and subscale scores have good to excellent internal consistency reliability, similar to the data from the normative sample. Also similar to the normative sample, correlations among the subscales of the GAS in this clinical sample were all moderate to high, as expected, but they do not completely overlap. This suggests that each subscale measures a unique aspect of anxiety and contributes something distinct to the measure. Finally, results provide solid evidence of convergent and discriminant validity based on the pattern of strong positive correlations with a measure of depression, moderate negative correlations with a measure of overall functioning (the GAF), and no relationships with education, a variable that should not be related to anxiety.

3.3. General discussion

This paper describes development of a new, brief, self-report assessment instrument for anxiety in later life, called the GAS (Study 1) and includes an evaluation of the psychometric properties of the GAS among community-dwelling older adults (Study 2) and an evaluation among a clinical sample of older adults receiving outpatient mental health services (Study 3). Overall, the results provide solid evidence for the internal consistency and convergent validity of the GAS. Unique features of this measure are that the items were derived from the diagnostic criteria for anxiety disorders according to the *DSM-IV-TR*, the response format is dimensional on a 4-point scale, and the GAS includes five content areas that are designed to help clinicians and researchers identify specific domains of concern (e.g., finances, becoming a burden to others) that may be targeted for more thorough exploration.

Two important issues as to potential confounds in the screening for anxiety in later life deserve some comment. First, we are aware of the inherent difficulty in including somatic items in the GAS because of the comorbidity of anxiety and medical illness for some older adults (e.g., Kogan et al., 2000; Wolitzky-Taylor et al., 2010). We decided to include somatic items in the GAS because somatic experiences of anxiety are core aspects of many of the anxiety disorders. To exclude these symptoms would ignore important components of anxiety that should be assessed in a screening measure. Because we have created a somatic subscale, clinicians and researchers using the GAS can follow-up on positive screening scores to determine the extent to which the endorsed somatic symptoms are due to anxiety, medical illness, or a combination of both.

The second potential confound involves the potential overlap of symptoms of anxiety with those of depression. Indeed, the relationships between GAS total scores and GDS depression scores in the community sample ($r = .78$) and in the clinical sample ($r = .73$) revealed significant overlap. As noted earlier, comorbidity between depression and anxiety is a common occurrence among younger and older adults, and is due in part to some overlap of the *DSM-IV-TR* diagnostic criteria for depression and anxiety disorders. To explain the comorbidity, Teachman, Siedlecki, and Magee (2007) have suggested another hypothesis, namely that depression and anxiety share certain psychological and perhaps neurological underpinnings which create the comorbidity. In a related line of thought, Meeks, Woodruff-Borden, and Depp (2003) suggest that there is a unitary factor of "distress" that incorporates anxiety and depression among older adults rather than the common tripartite model of anxiety and depression that appears to be robust among younger adults.

It is important to note that this pattern of strong relationships between anxiety measures and depression measures is not unique to the GAS. For example, Beck and Steer (1990) reported the correlation of $r = .48$ between the BAI and the Beck Depression Inventory. In our community sample, the GDS showed comparable correlations with the other anxiety measures besides the GAS, including the STAI-Trait scale ($r = .84$), STAI-State scale ($r = .78$), BAI ($r = .70$), and the AMAS-E total ($r = .68$). Notably, in our clinical sample, the GAS somatic subscale actually had a lower correlation with the GDS than the other two GAS subscales suggesting that somatic symptoms of the GAS did not largely account for the substantial convergence between the GAS and the GDS.

Several limitations of this study should be noted. First, the community and clinical samples were largely homogenous (European-American) with respect to ethnic diversity. The psychometric properties of the GAS should be examined in more diverse samples of older adults, especially given the looming and important demographic shift in the older adult population toward markedly increased diversity, with the percentage of minority older adults expected to grow from 19% in 2006 to 39% of the older adult population in the United States by 2050 (Federal Interagency Forum on Aging-Related Statistics, 2008). Second, the three subscales of the GAS were conceptually based and not empirically derived. Whereas conceptually based measures are inherently useful, and the GAS and its subscales demonstrated adequate reliability and validity, there were not enough participants especially in the clinical sample to conduct a factor analysis. Future studies with larger samples should explore the factorial validity of the GAS. Third, whereas the present studies preliminarily support use of the GAS in community-dwelling and outpatient psychiatric sample, further validity studies of the GAS should explore its utility in other relevant settings including long-term care facilities, inpatient units, and diverse integrated care settings (e.g., primary care). Fourth, we did not assess for medical problems in the samples. As such, we are uncertain whether presence of medical illness will inflate scores on the GAS. The latter is a recognized problem with the BAI (e.g., Wetherell & Gatz, 2005), and this potential impact should be explored with the GAS in diverse samples of medically ill older adults. Another avenue for future research would be to evaluate sensitivity and specificity of various "cutoff" scores of the GAS compared to formal psychiatric diagnoses based on semi-structured interviews which represent the current gold standard for psychiatric diagnosis (e.g., Segal & Coolidge, 2007).

In conclusion, it is critical to understand that significant anxiety, that is anxiety that causes distress or impairs an individual's ability to function effectively in important life domains, is not a normal part of aging. Because there are now several evidence-based psychotherapies for the treatment of late-life anxiety (see review by Ayers, Sorrell, Thorp, & Wetherell, 2007), *screening and detection* of excessive anxiety is paramount. The present results support the preliminary validity of the GAS for such purposes, and further research on the measure appears warranted.

Author note

This article is partly based on a Master's thesis by Matthew Payne. The GAS is available for free for research purposes and may be obtained from Professor Daniel L. Segal, PhD, University of Colorado at Colorado Springs, Department of Psychology, Colorado Springs, CO 80918. E-mail: dsegal@uccs.edu.

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