

The Impact of *DSM-IV* Symptom and Clinical Significance Criteria on the Prevalence Estimates of Subthreshold and Threshold Anxiety in the Older Adult Population

Sébastien Grenier, Ph.D., Michel Prévile, Ph.D., Richard Boyer, Ph.D., Kieron O'Connor, Ph.D., Sarah-Gabrielle Béland, M.Sc., Olivier Potvin, Ph.D., Carol Hudon, Ph.D., Joëlle Brassard, M.Sc., and the Scientific Committee of the ESA Study

Centre de recherche de l'Hôpital Charles Lemoyne (SG, MP, S-GB, OP, JB), Université de Sherbrooke, Greenfield Park, Quebec, Canada; Centre de recherche Fernand-Seguin (RB, KO), Hôpital Louis-H. Lafontaine, Université de Montréal, Quebec, Canada; Département de psychoéducation et de psychologie (KO), Université du Québec en Outaouais, Gatineau, Quebec, Canada; Centre de recherche Université Laval Robert-Giffard (OP, CH), Quebec City, Quebec, Canada, and École de psychologie (CH), Université Laval, Quebec City, Quebec, Canada

Abstract

Objectives—Subthreshold anxiety refers to a condition where individuals do not meet the full symptom criteria (i.e., the number of symptoms required for a formal diagnosis is not reached) and/or do not report significant impairment or distress in functioning (i.e., the clinical significance criterion is not met). The purpose of this study was to examine how the symptom and the clinical significance criteria may affect the prevalence estimates of anxiety problems in the older adult population and whether applying these criteria results in an identifiable older group showing more severe anxiety.

Setting and Participants—Data came from a large representative sample of community-dwelling older adults age 65 years and older (N = 2,784).

Results—Results showed that the 12-month prevalence rate of any anxiety problem varied from 5.6% when DSM-IV criteria for anxiety disorders were used to 26.2% when all subthreshold manifestations of anxiety were considered. Findings also indicated that when compared with respondents without anxiety, older adults presenting different manifestations of subthreshold or threshold anxiety appear to be more similar than different in their health and health behavior characteristics.

Conclusions—Subthreshold anxiety has a high prevalence and may cause significant impairment. Both symptom and clinical significance criteria do not perfectly discriminate between older adults with or without a severe anxiety problem presenting comorbid disorders and needing psychiatric help.

Keywords

Assessment; community-based survey; *DSM* anxiety disorders; health characteristics; older adults; subthreshold anxiety

Anxiety disorders fulfilling *DSM-IV* criteria are common in community-dwelling older adults with prevalence estimates hovering between 0.1% and 15%, depending on the time period considered.^{1–5} Studies suggest that late-life sub-threshold anxiety is even more prevalent^{6–8} and could significantly interfere with functioning as much as disorders meeting full *DSM* criteria.^{9–11} Subthreshold anxiety usually refers to a condition where individuals do not meet the full symptom criteria (i.e., the number of symptoms required for a formal diagnosis is not reached) and/or do not report significant impairment or distress in functioning (i.e., the clinical significance criterion is not met).^{6–8} Despite its relevance in older adults, manifestations of subthreshold anxiety are nevertheless not considered as disorders according to the *DSM-IV*, particularly when the clinical significance criterion is not met. The rationale behind the introduction of the clinical significance criterion was to help identify a group of people presenting a more severe condition needing psychiatric help.¹² One of the major problems with this criterion is that no operational definition exists for measuring impairment or distress.¹³ The evidence for impairment is often not clear-cut; clinicians have to rely on their own judgment to determine whether reported symptoms significantly interfere with daily functioning. Studies with younger adults suggest that the inclusion of the clinical significance criterion substantially decreases the prevalence rate of anxiety disorders by minimizing false positive (i.e., instances in which individuals who do not have a given psychiatric disorder are mistakenly diagnosed as having the disorder) and negative cases (i.e., instances in which individuals with a given psychiatric disorder are mistakenly diagnosed as not having the disorder).^{12–14} However, the use of this criterion with older adults may conversely increase the number of false-negative cases, since they are usually less active and less likely to perceive themselves as disabled than younger adults.¹⁵ In addition, because older adults are more likely to somatize their distress and to report less emotional disturbances,^{8,16–18} the symptom criteria may be harder to satisfy in this population.

Knowing that the symptom and the clinical significance criteria may pose problems in the older adult population, the aim of the current study was to answer the following questions: (a) how these criteria affect the prevalence estimates of anxiety problems in this population and (b) do these criteria identify a group of older adults presenting a more severe condition needing psychiatric help? To answer these questions, respondents with a full anxiety disorder were compared with respondents presenting different patterns of subthreshold anxiety on their sociodemographic, health, and health behavior characteristics. Since respondents' health and health behavior characteristics were chosen on the basis of their potential association with the severity of anxiety,^{19–22} they should distinguish older adults having a more severe condition, as a full anxiety disorder, from respondents with subthreshold anxiety as well as distinguishing older adults reporting subthreshold anxiety from others without symptoms of anxiety.

METHODS

Data used in this study came from a cross-sectional survey, the ESA study (Enquête sur la Santé des Aînés), conducted in 2005–2008, using a probabilistic sample of French-speaking community-dwelling older adults (94% of the population of Quebec speak French). Inclusion criteria were as follows: age 65 years and older and able to speak and understand French. Exclusion criteria were as follows: presence of severe or moderate cognitive problems as measured with the Mini-Mental State Exam (<22)²³ and residence in the northern regions of Quebec. In 2005, 10% of the elderly population resided in these northern regions. The present sampling procedure included stratification according to three geographical areas: metropolitan, urban, and rural. In each geographical area, a proportional sample of households was constituted across the 16 administrative regions of Quebec. Then, a random digit dialing method was used to develop the sampling frame of the study. Households within each of the 16 administrative regions were selected according to a random sampling method. A random process was also used to select only one older adult within the household. The response rate for the ESA study was 66.5%. The final sample consisted of 2,784 older adults (women = 59%) living in the community. Mean age of respondents was 73.8 years (SD: 6.06).

Procedure

Data were collected as follows. First, a healthcare professional contacted the potential respondents by phone to describe the objectives and the length of the study, answer their questions, and ask them to participate in an in-home interview. Furthermore, a letter describing the study was sent to reassure the potential participants of the credibility of the investigation and of the interviewer. Appointments were then made with those who volunteered. Respondents were offered \$15 compensation for their participation.

The in-home interviews, which lasted 90 minutes on average, were conducted by trained research nurses ($n = 20$), all staff members of a national polling firm. In preparation for the interviews, the nurses were given 2 days training on administration of the ESA computer-assisted questionnaires (the ESA-Q; see later) by the principal investigator (M.P.). The research procedure was reviewed and authorized by the ethics committee of the Sherbrooke University Geriatric Institute.

Measures

Assessment of anxiety disorders—The ESA-Q, developed by our research team based on the *DSM-IV* criteria, was used to evaluate the presence of the following six anxiety disorders in the year prior to the interview: panic disorder, agoraphobia, specific phobias, social phobia, generalized anxiety disorder, and obsessive–compulsive disorder (OCD). A detailed description of the diagnostic criteria used for each anxiety disorder is reported elsewhere.²⁴ The ESA-Q is similar to the Diagnostic Interview Schedule and the Composite International Diagnostic Interview, which demonstrated satisfactory reliability and validity.^{25–29} However, questions in the ESA-Q are adapted to older adults.

Operationalization of the clinical significance criterion—Presence of disabilities due to anxiety was measured by the ESA-Q in the following four areas of social functioning related to aging: (1) activities of daily living covering personal self-care (dressing, eating, and taking medicines), the ability to communicate (see, speak, and hear), the ability to move indoors or outdoors (walk, lean, use car, taxi, or bus); (2) domestic tasks such as preparing meals, grocery shopping, house maintenance, laundries, and managing personal finances; (3) social activities including participation in associations or clubs for the elderly, bingo, dancing, etc; (4) relationships with others involving family members, friends, and neighbors. Since older adults are generally less likely than younger adults to consider themselves as disabled,¹⁵ reporting impairment in at least one area of social functioning was considered as a significant disability (i.e., meeting the clinical significance criterion).

For the purpose of the study, respondents were divided into four groups according to the diagnostic criteria they met: (Group 1) respondents meeting full diagnostic criteria (i.e., the symptom criteria and the clinical significance criterion) for a specific anxiety disorder (mean number of anxious symptoms: 4.63; SD: 4.47); (Group 2) respondents fulfilling symptom criteria for a specific anxiety disorder but reporting no significant disabilities in social functioning ($M = 3.42$; SD: 3.40); (Group 3) respondents reporting symptoms of anxiety (e.g., anticipations, sweating, palpitations) not meeting symptom criteria for a disorder ($M = 2.96$; SD: 2.86); (Group 4) respondents reporting no symptoms of anxiety at all. Groups 2 and 3 represented different patterns of subthreshold anxiety.

Variables potentially associated with the severity of anxiety—The respondents' health characteristics were assessed on the basis of the number of self-reported *chronic physical health problems* according to the *International Classification of Disease (ICD-10)*³⁰ as well as on the presence of comorbid *minor or major depression* according to the *DSM-IV* criteria.³¹

The respondents' health behavior characteristics were assessed on the basis of the frequency of self-reported *use of health services* in the past year for anxiety management as well as on the *use of benzodiazepines*. The self-reported use of health services for anxiety was measured by responses to the following question: "During the past 12 months, did you consult a general practitioner or other health professional about the symptoms you just reported (yes or no)?" Finally, the self-reported use of benzodiazepines was measured by responses to this question: "During the past 12 months, did you take one of the following medications: Xanax or Alprazolam, Rivotril or Clonazepam, Ativan or Lorazepam, Serax or Oxazepam, Restoril or Témazepam, Dalmane or Flurazepam, Mogadon or Nitrazepam, Halcion or Triazolam and ProSom or Estrazolam (yes or no)?"

Confounding variables—Sociodemographic characteristics potentially associated with the presence of anxiety and the severity of symptoms included age, gender, marital status, and education. In this study, age was regrouped into two categories: 65–74 years and 75 years and over. The respondents' marital status was identified using two categories: married and single/divorced/widowed. The respondents' level of education was categorized as 0–7 years and 8 years and more.

Statistical Analyses

Data were weighted to ensure that the true representative proportion of older adults within each of the region and geographical areas were reflected in the analysis. Weights were determined on the basis of the following: (1) the probability of selection of the administrative region in the geographic area [$\pi(a)$]; (2) the conditional probability of selection of the household in the administrative region [$\pi(b/a)$]; and (3) the conditional probability of selection of the subject in the household [$\pi(c/ab)$]. The weight (w) attributed to each subject represented the inverse of its probability of selection [$1/(\pi(abc))$].

Polychotomous logistic regression analyses were employed to examine the associations between respondents' health and health behavior characteristics and the presence of different patterns of anxiety regrouped into four groups. We used odds ratios (ORs), with confidence intervals (CI) as measures of association, adjusted for confounding variables. All hypotheses were tested at the 5% significance level.

RESULTS

As shown in Table 1, our results indicated that depending on the diagnostic criteria used, the 12-month prevalence rates varied widely from 5.6% for any *DSM-IV* anxiety disorders to 26.2% when all sub-threshold manifestations of anxiety were included (i.e., groups 2 and 3). Specifically, the 12-month prevalence rate of any anxiety disorder increased from 5.6% to 10.2% (i.e., Group 1 + Group 2) when the clinical significance criterion was removed. Also, the 12-month prevalence rate of cases with subthreshold anxiety (i.e., groups 2 + 3) was 20.5%, an increment of 14.9% compared to the prevalence rate of older adults fulfilling *DSM-IV* criteria for any anxiety disorder (i.e., 5.6%). In particular, prevalence rates increased across all anxiety disorders when subthreshold cases (i.e., groups 2 + 3) were added to the estimates; the highest increase was for specific phobias (5.8%) and the lowest for OCD (0.1%). Differences in proportions (i.e., [Groups 2 + 3] – Group 1) were all significant according to the McNemar's test (all $\chi^2 = 22.01$, $df = 1$, $p < 0.0001$), except for OCD ($\chi^2 = 0.11$, $df = 1$, $p = 0.41$). Finally, it should be noted that on the 334 respondents having anxiety not meeting symptom criteria for a DSM disorder (i.e., Group 3), 11.0% ($n = 37$) of them reported significant disabilities in social functioning (not reported in Table 1).

Sociodemographic Characteristics Among Respondents

As shown in Table 2 subjects presenting *DSM-IV* subthreshold or threshold anxiety (i.e., Groups 1 to 3) were more likely to be women ($OR_{\text{Group 1 vs. 4}} = 1.84$; 95% CI = 1.24–2.72; $OR_{\text{Group 2 vs. 4}} = 2.45$; 95% CI = 1.56–3.84; $OR_{\text{Group 3 vs. 4}} = 1.54$; 95% CI = 1.20–1.97) and younger than 75 ($OR_{\text{Group 1 vs. 4}} = 1.48$; 95% CI = 1.01–2.15; $OR_{\text{Group 2 vs. 4}} = 1.62$; 95% CI = 1.08–2.43; $OR_{\text{Group 3 vs. 4}} = 1.56$; 95% CI = 1.22–2.00) than respondents without symptoms of anxiety. Furthermore, older adults with a full anxiety disorder were more likely to be educated than respondents in Group 2 ($OR = 1.88$; 95% CI = 1.04–3.39) and older adults with anxiety not meeting symptom criteria for an anxiety disorder were more likely to be single, divorced, or widowed than respondents in Group 4 presenting no symptom of anxiety ($OR = 1.35$; 95% CI = 1.05–1.72). However, our results indicated that respondents with a full anxiety disorder did not differ significantly from those reporting any manifestations of subthreshold anxiety according to gender, age, and marital status.

Health Characteristics and Comorbid Conditions Among Respondents

As indicated in Table 2, respondents presenting either *DSM-IV* subthreshold or threshold anxiety (i.e., Groups 1 to 3) reported significantly more chronic physical health problems ($OR_{\text{Group 1 vs. 4}} = 1.19$; 95% CI = 1.10–1.29; $OR_{\text{Group 2 vs. 4}} = 1.11$; 95% CI = 1.01–1.21; $OR_{\text{Group 3 vs. 4}} = 1.17$; 95% CI = 1.10–1.23), and depressive disorders ($OR_{\text{Group 1 vs. 4}} = 4.05$; 95% CI = 2.45–6.70; $OR_{\text{Group 2 vs. 4}} = 2.39$; 95% CI = 1.26–4.51; $OR_{\text{Group 3 vs. 4}} = 4.05$; 95% CI = 2.84–5.78) than older adults without symptoms of anxiety. However, our results showed that the number of chronic physical health problems as well as the presence of a comorbid minor or major depressive disorder did not differ significantly between older adults with a full anxiety disorder and others presenting different patterns of subthreshold anxiety.

Health Behavior Characteristics Among Respondents

Results reported in Table 2 also indicated that older adults with a full anxiety disorder were significantly more likely to consult a healthcare professional for anxiety management than respondents in Group 3 not meeting symptom criteria ($OR = 1.76$; 95% CI = 1.03–3.01). Respondents reporting a full anxiety disorder and those with anxiety not meeting symptom criteria were also more likely to use benzodiazepines than older adults without symptoms of anxiety ($OR_{\text{Group 1 vs. 4}} = 1.95$; 95% CI = 1.34–2.85; $OR_{\text{Group 3 vs. 4}} = 2.25$; 95% CI = 1.76–2.88). However, no other group differences were observed with regard to benzodiazepine use. Furthermore, respondents with a full anxiety disorder did not differ significantly from older adults fulfilling symptom criteria without significant disabilities according to health and health behavior characteristics.

DISCUSSION

This study aimed to examine how symptom and clinical significance criteria can affect the prevalence estimates of anxiety problems in the older adult population and to verify whether these criteria do indeed identify a group of older adults presenting a more severe condition in need of psychiatric help. Overall, and contrary to expectations, these criteria seem not to perfectly discriminate between older adults with or without a severe condition needing psychiatric help. When compared with respondents without anxiety, older adults presenting different manifestations of sub-threshold or threshold anxiety appear to be more similar than different in their health and health behavior characteristics.

Prevalence Rates According to *DSM-IV* Diagnostic Criteria

Results indicate that the 12-month prevalence rates of any anxiety problem among older adults may vary considerably according to the diagnostic criteria used. With less restrictive diagnostic criteria, 26.2% of the older adults report some degree of anxiety symptoms, whereas 5.6% of the respondents meet the more restrictive *DSM-IV* diagnostic criteria for a full anxiety disorder. In particular, and in agreement with results from recent population-based studies, our findings show that women and respondents age 65–74 years are respectively 1.9 and 1.5 times more likely to report a full anxiety disorder than men and respondents age 75 and over.^{4,32,33} Results are furthermore in line with recent studies suggesting that symptoms of specific phobia, below the threshold for a *DSM-IV* diagnosis,

are common among older adults.^{4,7} Results also indicate that the 12-month prevalence of any anxiety disorder increases by 4.6% when the clinical significance criterion is removed. These results are in line with previous studies suggesting that adding this criterion decreased the prevalence rate of anxiety disorders substantially.^{12,14} This proportion of older adults (i.e., 4.6%), generally not considered as having a DSM anxiety disorder could nevertheless represent false-negative cases as suggested by our results and by other researchers.^{13,34} The lower prevalence rates of anxiety disorders usually found among older adults compared with younger ones^{35–36} may thus be partly attributable to the use of the clinical significance criterion. Other epidemiologic and clinical studies should be undertaken to test this hypothesis.

Do Symptom Criteria Identify Older Adults Presenting More Severe Anxiety Problems?

Current results suggest that symptom criteria may fail to identify a group of older adults presenting a more severe condition needing psychiatric help since older adults meeting or not meeting these criteria do not significantly differ on several health and health behavior characteristics potentially associated with the severity of their symptoms. Another result supporting this conclusion is that 11.0% of the older adults with anxiety not meeting symptom criteria still report significant disabilities in social functioning. This suggests that even with fewer symptoms, anxiety problems may have severe consequences. These findings are in accordance with recent studies showing that older people, like younger ones, may report clinically significant symptoms that fall below the diagnostic thresholds set by the *DSM-IV* criteria.^{18,37}

Does the Clinical Significance Criterion Identify Older Adults Presenting More Severe Anxiety Problems?

The present results support the idea that the clinical significance criterion may be insufficient as a means to clearly identify older people presenting a more severe condition in need of psychiatric help. Results suggest that compared with older adults fulfilling symptom criteria without significant disabilities, respondents with a full anxiety disorder show no significant difference on the number of chronic physical health problems, the presence of minor or major depression, as well as on health service and benzodiazepine use, characteristics usually associated with the severity of anxiety.^{19–22} Studies with younger adults have nevertheless suggested that the addition of this criterion usually increases the rigor of the resulting diagnoses.^{12,34,38} The discrepancy between our results and those of the studies mentioned earlier could be explained by the fact that older adults are usually more reluctant to declare themselves disabled than younger people, since the presence of impairment is generally perceived as a natural part of growing old.¹⁵ Consequently, for a given level of severity, younger adults with anxiety might be more likely to perceive significant impairment, to seek treatment or to use medication than their elders. Further studies are nevertheless needed to document this hypothesis.

In sum, it can be concluded that the symptom and the clinical significance criteria do not perfectly discriminate between older adults with or without a severe anxiety problem presenting physical or psychiatric comorbid disorders and needing psychiatric help. However, this conclusion must be qualified since it seems that the combination of both

criteria may be associated with the use of health services for anxiety management. In agreement with a recent study, our results show that older adults with a full anxiety disorder are 1.8 times more likely to use health services for anxiety management than those presenting with anxiety that does not meet both symptom and clinical significance criteria.³⁹

Strengths and Limitations of the study

The strengths of this study include the use of a large representative community-based sample of older adults, the assessment of social functioning areas related to aging as well as the focus on subthreshold anxiety usually more common than full anxiety disorders in the older adult population. However, some limitations must be taken into account. First, a structured and standardized instrument (the ESA-Q) was used by trained nurses to assess symptoms of anxiety. Despite the advantages of using this method of assessment in epidemiologic studies, it may include difficulties in discriminating between mild and severe anxiety as well as between anxious and depressive symptoms especially among the elderly. Results should be replicated in a clinical setting by using experts in psychiatric diagnosis and aging (e.g., geropsychiatrists or geropsychologists). Second, the presence of significant disabilities in social functioning was self-rated by respondents. No family members or other third parties were consulted. Despite the fact that older adults are usually in the best position to assess their own physical and mental condition, it would have been of interest to compare ratings from distinct sources.

Clinical Implications and Recommendations

These results have important clinical implications for the classification of anxiety disorders among older adults. First, the present study provides evidence for the fact that subthreshold anxiety has a high prevalence among community-dwelling older adults. Second, clinicians working with this population should be vigilant to subthreshold fears that may impair social functioning, and so, even if only few symptoms of anxiety are reported. Moreover, the present results suggest that there is a need to develop aging-specific epidemiologic instruments for anxiety disorders, which include subthreshold manifestations, in order to provide a more accurate representation of anxiety in the elderly. Third, the use of the clinical significance criterion should be done with caution in the elderly population since it does not perfectly discriminate between people with or without a severe anxiety problem needing psychiatric help. The current study supports the idea that anxiety problems fulfilling symptom criteria with or without self-rated disabilities in social functioning might both represent severe conditions associated with minor or major depression in the older adult population. Late-life anxiety disorders should be viewed on a continuum in terms of the number of symptoms, frequency, impairment or severity and not as all-or-nothing phenomena. Even if no significant disability is reported by older patients with anxiety, clinicians should not underestimate its probable impact on daily functioning as well as the particular need for psychiatric services or medications. Since older adults are usually more reluctant to declare themselves disabled, information about impairment may be gathered from family members. When used with older adults presenting anxiety, the clinical significance criterion should be adapted to their reality by considering other-rated impairment and, as done in the current study, by including age-relevant activities (e.g., participation in associations or clubs for the elderly, bingo). Fourth, the current study

provides evidence that the presence of minor or major depression should be investigated not only in older adults with a full *DSM-IV* anxiety disorder but also in those presenting subthreshold anxiety. Clinicians or researchers should keep in mind that depression may be masked by late-life anxiety, and vice versa. As stated in a recent study,⁴⁰(p791) “assessment and treatment planning for one type of disorder (depressive or anxiety) should not occur without assessment of the other type of disorder.” Further research is needed to better understand how these conditions interact with each other and how they may be influenced by cognitive impairment, often associated with aging.

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TABLE 1
 Twelve-Month Prevalence of Anxiety Disorders and Subthreshold Anxiety Among Older Adults Living in the Community According to Diagnostic Criteria (N = 2784; Weighted Data)

	Panic		Agoraphobia		Specific Phobia		Social Phobia		Generalized Anxiety		Obsessive-Compulsive		Any Anxiety Disorder	
	% ^a (n)	95% CI	% ^a (n)	95% CI	% ^a (n)	95% CI	% ^a (n)	95% CI	% ^a (n)	95% CI	% ^a (n)	95% CI	% ^a (n)	95% CI
Group 1 (N = 132) Full DSM-IV anxiety disorder (i.e., fulfilling the symptom and the clinical significance criteria)	0.6 (18)	0.4–1.0	0.3 (8)	0.2–0.6	2.0 (55)	1.5–2.6	0.07 (2)	0.02–0.3	1.2 (33)	0.8–1.7	1.5 (41)	1.1–2.0	5.6 (157) ^b	4.8–6.5
Group 2 (N = 113) Symptoms of anxiety meeting symptom criteria without significant disabilities	0.2 (6)	0.1–0.5	0.9 (25)	0.6–1.3	3.1 (88)	2.6–3.9	0.1 (4)	0.05–0.4	0.2 (5)	0.08–0.4	0.0 (0) ^c	0.0–0.1	4.6 (128) ^b	3.9–5.4
Group 3 (N = 334) Symptoms of anxiety not meeting symptom criteria	2.4 (67)	1.9–3.0	3.3 (92)	2.7–4.0	4.7 (130)	3.9–5.5	1.2 (34)	0.9–1.7	2.8 (78)	2.2–3.5	1.6 (44)	1.2–2.1	15.9 (445) ^b	14.6–17.3
Total prevalence of cases with subthreshold anxiety (Groups 2 and 3)	2.6 (73)	2.1–3.3	4.2 (117)	3.5–5.0	7.8 (218)	6.9–8.9	1.3 (38)	1.0–1.9	3.0 (83)	2.4–3.7	1.6 (44)	1.2–2.1	20.5 (573) ^b	19.1–22.1
Total prevalence of cases with subthreshold or threshold (DSM-IV) anxiety (Groups 1 to 3)	3.2 (91)	2.7–4.0	4.5 (125)	3.8–5.3	9.8 (273)	8.7–10.9	1.4 (40)	1.1–1.9	4.1 (116)	3.5–5.0	3.0 (85)	2.5–3.7	26.2 (730) ^b	24.5–27.8

^aBased on the total sample (N = 2784).

^bSome people had more than one subthreshold or anxiety disorder.

^cAll subjects with obsessive-compulsive disorder reported disabilities.

Patterns of Anxiety Among Older Adults (Weighted Data)

Anxiety Symptom	Group 1 Versus Group 3 ^a					Group 1 Versus Group 4 ^a					Group 2 Versus Group 3 ^a					Group 2 Versus Group 4 ^a								
	OR	95% CI	Wald χ^2	p		OR	95% CI	Wald χ^2	p		OR	95% CI	Wald χ^2	p		OR	95% CI	Wald χ^2	p					
1-3	1.19	0.77-1.87	0.63	0.43	<i>b</i>	1.84	1.24-2.72	9.34	0.002	<i>b</i>	1.59	0.97-2.63	3.34	0.07	<i>b</i>	2.45	1.56-3.84	15.18	<0.001	<i>b</i>	1.54	1.20-1.97	11.32	0.001
2-4	0.94	0.61-1.46	0.07	0.80	<i>b</i>	1.48	1.01-2.15	4.09	0.04	<i>b</i>	1.03	0.65-1.64	0.02	0.89	<i>b</i>	1.62	1.08-2.43	5.32	0.02	<i>b</i>	1.56	1.22-2.00	12.62	<0.001
3-4	0.76	0.49-1.15	1.69	0.19	<i>b</i>	1.02	0.70-1.47	0.007	0.94	<i>b</i>	0.79	0.51-1.24	1.04	0.31	<i>b</i>	1.07	0.72-1.59	0.10	0.76	<i>b</i>	1.35	1.05-1.72	5.63	0.02
1-4	1.36	0.83-2.24	1.45	0.23	<i>b</i>	1.25	0.80-1.96	0.99	0.32	<i>b</i>	0.72	0.45-1.16	1.82	0.18	<i>b</i>	0.67	0.44-1.01	3.67	0.06	<i>b</i>	0.92	0.71-1.21	0.35	0.56
1-5	1.02	0.94-1.12	0.27	0.60	<i>b</i>	1.19	1.10-1.29	18.53	<0.001	<i>b</i>	0.95	0.86-1.05	1.04	0.31	<i>b</i>	1.11	1.01-1.21	5.02	0.03	<i>b</i>	1.17	1.10-1.23	30.96	<0.001
2-5	1.00	0.58-1.72	0.00	1.00	<i>b</i>	4.05	2.45-6.70	29.60	<0.001	<i>b</i>	0.59	0.30-1.15	2.41	0.12	<i>b</i>	2.39	1.26-4.51	7.16	0.007	<i>b</i>	4.05	2.84-5.78	59.24	<0.001

	Group 1 Versus Group 3 ^a			Group 1 Versus Group 4 ^a			Group 2 Versus Group 3 ^a			Group 2 Versus Group 4 ^a			Group 3 Versus Group 4 ^a									
% CI	Wald χ^2	p	OR	95% CI	Wald χ^2	p	OR	95% CI	Wald χ^2	p	OR	95% CI	Wald χ^2	p	OR	95% CI	Wald χ^2	p				
-3.17	1.68	0.20	1.76	1.03-3.01	4.21	0.04	NA	NA	1.11	0.59-2.09	0.10	0.75	NA	NA	NA	NA	NA	NA	NA			
-2.36	1.26	0.26	0.87	0.57-1.32	0.44	0.51	1.95	1.34-2.85	12.18	<0.001	0.64	0.40-1.01	3.68	0.06	1.43	0.94-2.18	2.76	0.10	2.25	1.76-2.88	42.20	<0.001
			<i>b</i>				<i>b</i>				<i>b</i>				<i>b</i>		<i>b</i>					

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for confounding variables.

then we increase the number of physical problems by one unit.