The 1-Month Prevalence of Generalized Anxiety Disorder According to DSM-IV, DSM-V, and ICD-10 Among Nondemented 75-Year-Olds in Gothenburg, Sweden

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Objective: *To examine the 1-month prevalence of generalized anxiety disorder (GAD) according to* Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), Diagnostic and Statistical Manual of Mental, Fifth Edition (DSM-V), and International Classification of Diseases, Tenth Revision *(ICD-10), and the overlap between these criteria, in a population sample of 75-year-olds. We also aimed to examine comorbidity between GAD and other psychiatric diagnoses, such as depression.* **Method:** *During 2005–2006, a comprehensive semistructured psychiatric interview was conducted by trained nurses in a representative population sample of 75-year-olds without dementia in Gothenburg, Sweden (N = 777; 299 men and 478 women). All psychiatric diagnoses were made according to DSM-IV. GAD was also diagnosed according to ICD-10 and DSM-V.* **Results:** *The 1-month prevalence of GAD was 4.1% (N = 32) according to DSM-IV, 4.5% (N = 35) according to DSM-V, and 3.7% (N = 29) according to ICD-10. Only 46.9% of those with DSM-IV GAD fulfilled ICD-10 criteria, and only 51.7% and 44.8% of those with ICD-10 GAD fulfilled DSM-IV/V criteria. Instead, 84.4% and 74.3% of those with DSM-IV/V GAD and 89.7% of those with ICD-10 GAD had depression. Also other psychiatric diagnoses were common in those with ICD-10 and DSM-IV GAD. Only a small minority with GAD, irrespective of criteria, had no other comorbid psychiatric disorder. ICD-10 GAD was related to an increased mortality rate.* **Conclusions:** *While GAD was common in 75-year-olds, DSM-IV/V and ICD-10 captured different individuals. Current definitions of GAD may comprise two different expressions of the disease. There was greater congruence between GAD in either classification system and depression than between DSM-IV/V GAD and ICD-10 GAD, emphasizing the close link between these entities.* (Am J Geriatr Psychiatry 2012; 00:1–10)

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Generalized anxiety disorder (GAD) is characterized by extensive and excessive worries, apprehensive expectation, and anxiety concerning everyday events and problems. Common symptoms include restlessness, muscle tension, and sleep disturbance. Few studies have examined the prevalence and characteristics of GAD in older adult populations. The general opinion is that the frequency of GAD increases with age, at least until age 40–55 years,[1-4] and that the frequency may decline thereafter.[5,6] It has also been suggested that GAD manifests as a somatization disorder in older adults.[7] Most population studies on the prevalence of GAD in older adults have used the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV) criteria,[8] and the prevalence (1 month to 6 months) ranges between 1.1% and 7.3%.[1,4,5,9] The disparities between studies partly depend on whether the exclusion criteria regarding presence of other DSM-IV disorders are applied.

Historically, GAD evolved from the concept of anxiety neurosis. With the introduction of DSM-III[10] in 1980, anxiety neurosis was divided into panic disorder and GAD. The two main current classification systems of psychiatric disorders, DSM-IV and *International Classification of Diseases 10th Revision*,[11] as described in the *International Classification of Diseases, Tenth Revision* (ICD-10) Classification of Mental and Behavioural Disorders, Diagnostic criteria for research (ICD-10),[12] share the core symptoms (i.e., worries and anxiety about everyday events and problems) in their criteria for GAD. However, there are also some differences. First, autonomic arousal symptoms are mandatory in ICD-10 and are not included at all in DSM-IV. The removal of autonomic symptoms in DSM-IV increased the disparity between the two classification systems.[13,14] These symptoms were included in the previous version of DSM-III-R,[15] as well as in ICD-10. Thus, DSM-III-R and ICD-10 are more similar than DSM-III-R and DSM-IV. Second, worry is required to be excessive in DSM-IV, while only prominent symptoms are required in ICD-10. Third, ICD-10 includes tension among its gateway symptoms and lists a number of associated symptoms that are not listed in DSM-IV (e.g., feeling dizzy or going crazy, depersonalization, symptoms from chest and abdomen, and other somatic symptoms). Fourth, being easily fatigued is included in DSM-IV but not in ICD-10.

Not surprisingly, large discrepancies between ICD-10 and DSM-IV have been found in adult populations mainly because of the inclusion of autonomic arousal symptoms in ICD-10 and the requirement of excessive worry in DSM-IV.[14] A better concordance between the two diagnostic systems has been reported in clinical settings.[16] It has also been suggested that DSM-IV and ICD-10 capture two different, partly overlapping, expressions of GAD.[17] The recently proposed DSM-V[18] differs from DSM-IV in that excessive anxiety and worry need to be accompanied by fewer other anxiety-associated symptoms. Furthermore, it needs to be associated with one of four defined behaviors and two or more domains of activities or events related to worry. In addition, the requirement in DSM-IV that worries should be difficult to control has been abandoned in DSM-V. In short, DSM-V focuses even more on worries than DSM-IV. Little is known about how different classification systems influence the prevalence of GAD in older populations.

Another debate concerns the large overlap between GAD and other psychiatric disorders, mainly depression,[19,20] and whether GAD should be included among the anxiety disorders or among the mood disorders.[19,20] This debate has mainly been concerned with younger age groups.

We aimed to examine the 1-month prevalence of GAD according to the existing criteria DSM-IV and ICD-10, and the overlap between these criteria, in a population sample of 75-year-olds. Furthermore, we also examined the proposed criteria of DSM-V, the comorbidity between GAD and other psychiatric diagnoses, such as depression, and 3-year mortality rate.

METHODS

Sample

During 2005 and 2006, 75-year-olds born 1930 were invited to a health examination in Gothenburg, Sweden. The sample was obtained from the Swedish Population Register, on the basis of birth date, and

included both persons living in private households and institutions. Among those selected (N = 1363), 11 died before they could be examined, 18 could not be traced, 15 had emigrated outside Sweden, and 32 could not speak Swedish, leaving an effective sample of 1,287 individuals. Among these, 827 (321 men and 506 women) accepted to take part in the psychiatric examination (response rate 64.3%). Out of the 827, 49 were excluded because of dementia and one because of missing symptom ratings, leaving 777 individuals (299 men and 478 women) for the study. Nonparticipants more often died before the age of 78 years compared with participants (14.3% versus 4.7%; $\chi^2 = 37$, p <0.001, df = 1). There were no significant differences between the groups regarding gender, marital status, or hospitalization during the last year with psychiatric diagnoses (5.7% versus 4.2%; $\chi^2 = 1.3$, p = 0.251, df = 1), depression (3.0% versus 1.8%; $\chi^2 = 2.0$, p = 0.154, df = 1), anxiety disorders (1.5% versus 0.5; $\chi^2 = 3.8$, p = 0.053, df = 1), or dementia (4.1% versus 2.4%; $\chi^2 = 2.9$, p = 0.086, df = 1), according to the Swedish Hospital Discharge register.

Initial contact was made by mail, followed by a telephone call. Most participants were investigated at the geriatric outpatient clinic of Vasa Hospital in Gothenburg. Those who declined examination at the outpatient clinic were offered home visits. After complete description of the study to the subjects, written informed consent was obtained from all participants and/or their relatives. The study was approved by the Ethics Committee for Medical Research at the University of Gothenburg.

Assessments

Trained psychiatric research nurses performed the semistructured psychiatric examinations, which included ratings of past month psychiatric signs and symptoms according to the Comprehensive Psychopathological Rating Scale (CPRS)[21] and the Mini-International Neuropsychiatric Interview (MINI).[22] Questions regarding the duration and severity of symptoms were also included. Mental and social functioning was assessed with the Global Assessment of Functioning (GAF) scale.[15] Furthermore, specific assessments relevant for dementia diagnoses, such as recent and remote memory, semantic memory, concentration, judgment, and abstract thinking were also included,[23] as well as assessments from the Alzheimer's Disease Assessment Scale-Cognitive.[24]

Interrater reliability was investigated among 50 individuals who had dual rating by either psychiatric research nurses or psychiatrists. Interrater agreement for the signs and symptoms included in GAD diagnosis was high, with kappa values between 0.55 and 1.00. Among those used in diagnosing GAD core symptoms, "Inner tension" had $\kappa = 0.94$, "Worry over trifles" $\kappa = 0.90$, and "Muscle tension" $\kappa = 0.58$. In general, kappa values between 0.41 and 0.60 are regarded as moderate, 0.61–0.80 as good, and >0.80 as very good[25] Information on hospital care during the last year was obtained from the Swedish Hospital Discharge Register.

Major depression, social phobia, specific phobia, and obsessive–compulsive disorder were diagnosed according to DSM-IV criteria.[8] Minor depression was diagnosed according to Criteria Sets and Axes Provided for Further Study in DSM-IV. The diagnoses were based on symptoms during the month preceding the examination. Dementia was diagnosed according to DSM-III-R,[15] as previously described,[23] and used for exclusion only.

GAD was diagnosed according to DSM IV,[8] DSM-V,[18] and ICD-10 Diagnostic Criteria for Research (ICD-10)[12] on the basis of items from the MINI and CPRS. The ICD-10 symptom "dry mouth" is not covered by MINI or CPRS but was covered by another question in the general examinations. We had no questions regarding "exaggerated response to minor surprises," "feeling keyed up or on edge," and "difficulty breathing," which are included in ICD-10. The symptoms used in the diagnoses should have been present during the last month and are shown for the three classification systems in Table 1. Because of the nature of our study, we did not use the hierarchical exclusion criteria concerning other Axis I disorders, substance abuse, or physical disorders (e.g., hyperthyroidism). *Cigarette smoking* was defined as never smoked, ex-smoker, and current smoker. Education was dichotomized as compulsory (7 years) or more than compulsory. Physical activities during leisure time were rated as low (<4 hour/week) and high (>4 hour/week). Alcohol use was obtained from self-report. Cardiovascular disorders comprised angina pectoris (self-report, hospital discharge register), myocardial infarction (self-report, hospital discharge register), atrial fibrillation (self-report, hospital

TABLE 1. Symptoms Used in the Diagnosis of GAD According to DSM-IV, ICD-10, and DSM-V

	DSM-IV		ICD-10		DSM-V	
	Criterion A	Criterion C	Criterion A	Criterion B	Criterion A/D	Criterion C
Excessive anxiety[a]	X					
Prominent to excessive anxiety[a]			X			
Excessive worry[a]	X				X	
Prominent to excessive worry[a]			X			
Fear of dying[b]				X		
Feeling of losing control, "going crazy"[b]				X		
Derealization or depersonalization[b]				X		
Exaggerated response to minor surprises				X		
Feeling of choking[b]				X		
Muscle tension (reported/observed)[c]		X	X			X
Muscle tension or aches and pains[a]				X		
Restlessness or feeling keyed up or on edge (reported/observed)[c]		X		X		X
Feeling keyed up, on edge, or mentally tense				X		
Difficulty concentrating or mind going blank (reported/observed)[c]		X		X		X
Being easily fatigued[c]		X				X
Irritability (reported/observed)[c]		X				X
Persistent irritability (reported/observed)[a]				X		
Sleep disturbance[c]		X				X
Difficulties to sleep because of worrying[b]				X		
Palpitations or pounding heart (reported/observed)[c]				X[d]		
Dry mouth (reported/observed)				X[d]		
Trembling or shaking (reported/observed)[c]				X[d]		
Sweating (reported/observed)[c]				X[d]		
Difficulty breathing				X		
A sensation of a lump in the throat[b]				X		
Chest pain or discomfort[b]				X		
Nausea or abdominal distress[b]				X		
Numbness or tingling sensations[b]				X		
Feeling dizzy, unsteady, faint, or light-headed[b]				X		
Hot flushes or cold chills[b]				X		

Note. GAD: generalized anxiety disorder.
[a] Symptom derived from items included in Comprehensive Psychopathological Rating Scale.
[b] Symptom derived from items included in Mini-International Neuropsychiatric Interview.
[c] Symptom derived from items included in both Comprehensive Psychopathological Rating Scale and Mini-International Neuropsychiatric Interview.
[d] At least one of four autonomic arousal symptoms is required for a diagnosis according to the ICD-10 classification system.

discharge register), cardiac insufficiency (self-report, hospital discharge register), *claudicatio intermittens* (hospital discharge register), and stroke (self-report, hospital discharge register, key informant interview). Mortality data were obtained from the Swedish Population Register. Three-year survival was defined as being alive 3 years after the date of examination.

Statistical Methods

Differences in proportions were tested with Pearson χ^2, presented fully with χ^2 value and degrees of freedom. p values were considered significant at a level of $p < 0.05$ (two-tailed). Analysis of variance was used to test differences in means. Results are presented with *F* value and standard deviation (SD). Kappa (κ) value was used in measuring level of association. All statistical analyses were performed using SPSS 17.0 for Windows.

RESULTS

The 1-month prevalence of GAD was 4.1% (N = 32; 5.4% in women and 2.0% in men; $\chi^2 = 5.5$, p = 0.019, df = 1) according to DSM-IV, 4.5% (N = 35; 6.1% in

women and 2.0% in men; $\chi^2 = 7.1$, p = 0.008, df = 1) according to DSM-V and 3.7% (N = 29; 4.8% in women and 2.0% in men; $\chi^2 = 4.0$, p = 0.045, df = 1), according to ICD-10.

Table 2 describes the overlap between ICD-10, DSM-IV, and DSM-V regarding GAD diagnoses and comorbidity with other psychiatric diagnoses. Only 46.9% of those with DSM-IV GAD and 37.1% of those with DSM-V GAD fulfilled criteria for GAD according to ICD-10. Among those with ICD-10 GAD, only 51.7% fulfilled criteria according to DSM-IV ($\kappa = 0.47$, p <0.001) and 44.8% according to DSM-V ($\kappa = 0.38$, p <0.001) (Table 2). The overlap between DSM-IV GAD and DSM-V GAD was 87.5% ($\kappa = 0.83$, p <0.001). Depression was observed in 84.4% of those with DSM-IV GAD, in 74.3% in those with DSM-V GAD, and in 89.7% of those with ICD-10 GAD. Also, other psychiatric diagnoses were common in those with ICD-10, DSM-IV, and DSM-V GAD. Only 4 of 32 diagnosed with DSM-IV GAD, 7 of 35 with DSM-V GAD, and 1 of 29 with ICD-10 GAD had none of the other studied psychiatric disorders (depression, social phobia, obsessive–compulsive disorder, specific phobia).

A large group was thus only diagnosed with GAD according to one of the criteria. To illustrate this in more detail, we examined the symptom profile in three groups (those diagnosed only according to DSM-IV and not according to ICD-10, those diagnosed only according to ICD-10 and not according to DSM-IV, and those diagnosed according to both criteria) (Table 3). As expected, excessive worries or excessive anxiety were more related to DSM-IV and DSM-V, while autonomic symptoms were more often found in those diagnosed according to ICD-10. Other symptoms occurred in a similar frequency in ICD-10 GAD, DSM-IV, and DSM-V GAD. All of the 15 individuals diagnosed with GAD according to both DSM-IV and ICD-10 fulfilled criteria for either major or minor depression.

The mean GAF score (Table 4) was 88.3 (SD: 11.7) in those without GAD compared with 65.6 (SD: 12.7; $F_{[1,769]} = 103.91$, p <0.001) in those with GAD according to DSM-IV, 69.1 (SD: 15.2; $F_{[1,769]} = 77.78$, p <0.001) in those with DSM-V GAD, and 66.0 (SD: 15.5; $F_{[1,769]} = 88.66$, p <0.001) in those with ICD-10 GAD. If those with depression were excluded, the mean scores were slightly higher 71.0 (SD: 12.9), 80.3 (SD: 15.4), and 78.3 (SD: 16.1).

TABLE 2. One-Month Prevalence of DSM-IV Psychiatric Disorders in Relation to GAD in 75-Year-Olds and the Overlap Between GAD According to DSM-IV, ICD-10, and DSM-V

	GAD DSM-IV					GAD ICD-10					GAD DSM-V				
	No (n = 745)		Yes (n = 32)			No (n = 748)		Yes (n = 29)			No (n = 742)		Yes (n = 35)		
	N	%	N	%	χ^2	N	%	N	%	χ^2	N	%	N	%	χ^2
Social phobia (N = 23)	17	2.3	6	18.8[a]	28.97	15	2.0	8	27.6[a]	63.60	16	2.2	7	20.0[a]	37.05
OCD (N = 48)	41	5.5	7	21.9[b]	14.12	43	5.7	5	17.2[c]	6.360	41	5.5	7	20.0[b]	12.09
Specific phobia (N = 46)	35	4.7	11	34.4[a]	48.52	33	4.4	13	44.8[a]	81.87	34	4.6	12	34.1[a]	52.95
Depression (N = 166)	139	18.7	27	84.4[a]	78.88	140	18.7	26	89.7[a]	83.63	140	18.9	26	74.3[a]	61.10
Major depression (N = 42)	29	3.9	13	40.6[a]	80.96	27	3.6	15	51.7[a]	126.4	30	4.0	12	34.3[a]	59.79
DSM-IV GAD (N = 32)	-	-	-	-		17	2.3	15	51.7		4	0.5	28	80.0	
ICD-10 GAD (N = 29)	14	1.9	15	46.9		-	-	-	-		16	2.2	13	37.1	
DSM-V GAD (N = 35)	7	0.9	28	87.5		22	2.9	13	44.8		-	-	-	-	

Notes. OCD: obsessive–compulsive disorder.
[a] Significantly more common in GAD, p <0.001, df = 1.
[b] Significantly more common in GAD, p <0.01, df = 1.
[c] Significantly more common in GAD, p <0.05, df = 1.

TABLE 3. One-Month Prevalence of GAD Symptoms in 75-Year-Olds by Diagnostic Category

			Generalized Anxiety Disorder (GAD), %				
	No GAD (N = 731)	DSM-V GAD (N = 35)	All DSM-IV (N = 32)	DSM-IV Only (N = 17)	Both (N = 15)	ICD-10 Only (N = 13)	All ICD-10 (N = 29)
Excessive anxiety	0.7	31.4	43.8	35.3	53.3	0.0	27.6
Prominent to excessive anxiety	4.2	54.3	68.8	47.1	93.3	78.6	86.2
Excessive worry	1.2	100	87.5	88.2	86.7	0.0	44.8
Prominent to excessive worry	16.4	100	93.8	88.2	100	50.0	75.9
Fear of dying	0.0	2.9	3.1	0.0	6.7	0.0	3.4
Feeling of losing control, "going crazy"	0.0	2.9	3.1	0.0	6.7	7.1	6.9
Derealization/depersonalization	0.3	2.9	3.1	0.0	6.7	21.4	13.8
Feeling of choking	0.5	0.0	3.1	0.0	6.7	35.7	20.7
Muscle tension	7.5	54.3	68.8	70.6	66.7	64.3	65.5
Muscle tension or aches and pains	18.7	28.6	31.3	23.5	40.0	50.0	44.8
Restlessness or feeling keyed up or on edge	12.3	77.1	81.3	70.6	93.3	64.3	79.3
Irritability	11.6	45.7	56.3	64.7	46.7	57.1	51.7
Persistent irritability	22.0	8.6	12.5	5.9	20.0	14.3	17.2
Difficulty concentrating or mind going blank	5.5	65.7	71.9	76.5	66.7	78.6	72.4
Being easily fatigued	2.5	68.6	78.1	70.6	86.7	78.6	82.8
Sleep disturbance	48.4	91.4	90.6	82.4	100	85.7	93.1
Difficulty in getting to sleep because of worrying	13.0	80.0	75.0	58.8	93.3	78.6	86.2
Palpitations or pounding heart	2.6	17.1	40.6	5.9	80.0	85.7	82.8
Dry mouth (not due to medication or dehydration)	1.9	5.7	28.1	5.9	53.3	85.7	69.0
Trembling or shaking	2.5	14.3	40.6	5.9	80.0	78.6	79.3
Sweating	2.1	5.7	31.3	5.9	60.0	50.0	55.2
Autonomic arousal symptoms (palpitations, dry mouth, trembling, sweating)	3.0	22.9	50.0	5.9	100	100	100
A sensation of a lump in the throat	1.0	8.6	9.4	0.0	20.0	42.9	31.0
Chest pain or discomfort	1.4	22.9	25.0	5.9	46.7	57.1	51.7
Nausea or abdominal distress	1.4	22.9	21.9	17.6	26.7	42.9	34.5
Numbness or tingling sensations	0.0	2.9	3.1	0.0	6.7	21.4	13.8
Feeling dizzy, unsteady, faint, or light-headed	0.5	20.0	21.9	5.9	40.0	35.7	37.9
Hot flushes or cold chills	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Notes. No GAD: individuals not diagnosed with GAD, neither according to DSM-IV nor ICD-10; DSM-V: individuals diagnosed with GAD according to the new proposed DSM-V criteria; All DSM-IV: all individuals diagnosed with DSM-IV GAD; DSM-IV Only: individuals diagnosed with GAD according to DSM-IV, excluding those with a concurrent diagnosis according to ICD-10; Both: individuals diagnosed with both DSM-IV and ICD-10; ICD-10 Only: individuals diagnosed with GAD according to ICD-10, excluding those with a concurrent diagnosis according to DSM-IV; All ICD-10: all individuals diagnosed with ICD-10 GAD.

GAD, according to ICD-10, but not according to DSM-IV/V, was related to an increased 3-year mortality rate and an increased frequency of smoking (Table 5). DSM-IV GAD was related to low physical activity. None of the diagnostic categories were related to education, cardiovascular disease, or alcohol use.

DISCUSSION

We found a 1-month prevalence of around 4% for GAD according to DSM-IV, DSM-V, and ICD-10 in a population sample of 75-year-olds. However, even though ICD-10 and DSM-IV had a strikingly similar prevalence, they only captured the same individuals in about half of the cases. ICD-10 and DSM-V had even less overlap. Instead, the comorbidity between these criteria and depression was much higher, with a frequency of 84% in those with DSM-IV GAD, 74% in those with DSM-V GAD, and 90% in ICD-10 GAD. Comorbidity with depression was also considerably higher than with other anxiety disorders. GAD was related to decreased social and

TABLE 4. Social and Mental Functioning According to the Global Assessment of Functioning Scale in Relation to Different GAD Criteria

	Global Assessment of Functioning								
	All			Any Depression			No Depression		
All	N	Mean	SD	N	Mean	SD	N	Mean	SD
All	771	87.0	12.9	164	73.8	13.9	607	90.1	10.0
No GAD	725	88.3	11.7	126	76.4	12.7	599	90.8	9.8
DSM-IV GAD	32	65.6[a]	12.7	27	64.6	12.7	5	71.0	12.9
ICD-10 GAD	29	66.0[b]	15.5	24	66.9	12.8	3	78.3	16.1
DSM-V GAD	35	69.1[c]	15.2	26	65.2	13.4	9	80.3	15.4
DSM-IV only	17	67.7[d]	12.1	12	66.3	12.1	5	71.0	12.9
ICD-10 only	14	68.9[d]	17.5	11	66.4	17.6	3	78.3	16.1
Both	15	63.3[d]	13.5	15	63.3	13.5		NA	

Notes. Six individuals were excluded due to missing values. GAD: generalized anxiety disorder; All: total sample population; No GAD: individuals not diagnosed with GAD, neither according to DSM-IV nor ICD-10; DSM-IV, all individuals diagnosed with DSM-IV GAD; ICD-10: all individuals diagnosed with ICD-10 GAD; DSM-V: all individuals diagnosed with DSM-V GAD; DSM-IV only; individuals diagnosed with GAD according to DSM-IV, excluding those with a concurrent diagnosis according to ICD-10; ICD-10 only: individuals diagnosed with GAD according to ICD-10, excluding those with a concurrent diagnosis according to DSM-IV; Both: individuals diagnosed with both DSM-IV and ICD-10.

[a] Significantly lower compared with no GAD ($F_{[1,769]} = 103.91$, $p < 0.001$).
[b] Significantly lower compared with no GAD ($F_{[1,769]} = 88.66$, $p < 0.001$).
[c] Significantly lower compared with no GAD ($F_{[1,769]} = 77.78$, $p < 0.001$).
[d] No significant difference between the groups ($F_{[2,43]} = 0.617$, $p = 0.543$).

TABLE 5. GAD According to DSM-IV, ICD-10, and DSM-V in Relation to 3-Year Mortality, and Baseline Smoking, Physical Activity, Alcohol Use, and Cardiovascular Disease

	Generalized Anxiety Disorder							
	No GAD		DSM-IV		ICD-10		DSM-V	
	N (731)	%	N (32)	%	N (29)	%	N (35)	%
Current smoking	58	8	4	13	8	28[a]	5	14
Alcohol > 60 g per week	182	25	6	19	3	10	6	17
Low physical activity	55	8	5	16[b]	3	10	4	11
Only mandatory education	389	53	17	53	20	69	20	57
Any cardiovascular disease	229	31	8	25	13	45	9	26
Three-year mortality	39	5	3	9	5	17[c]	3	9

[a] Significantly more common compared with no GAD; $p < 0.001$ ($p < .001$, $\chi^2 = 23.8$, $df = 1$).
[b] Significantly more common compared with no GAD; $p < 0.05$ ($p = .046$, $\chi^2 = 3.97$, $df = 1$).
[c] Significantly more common compared with no GAD; $p < 0.01$ ($p = .007$, $\chi^2 = 7.25$, $df = 1$).

mental functioning in each of the three classification systems.

Our 1-month prevalence of GAD, according to DSM-IV, was similar to what has been reported in other older adult populations.[1,26,27] We found a slightly lower 1-month prevalence of ICD-10 GAD than for DSM-IV GAD, which is contrary to what is reported in younger individuals.[14,28] This could be an age effect, as it has been suggested that older adults are less likely to report autonomic symptoms (mandatory in ICD-10).[29] However, there is also evidence indicating that the aging brain responds with less autonomic activity to strong emotional states,[30] thus making autonomic symptoms less common in older adults and also supporting the need for age-appropriate diagnostic criteria.[31]

ICD-10 or DSM-IV/V captured different individuals in a large proportion. Less than half of the GAD cases identified by either ICD-10 or DSM-IV/V fulfilled criteria in both classification systems. The moderate correlation ($\kappa = 0.47$) between ICD-10 and DSM-IV is in line with findings in mixed-age populations,[14] while the correlation is reported to be stronger in clinical settings.[16] The moderate overlap may have several explanations. One may be that autonomic symptoms are mandatory in ICD-10, but not included at all in DSM-IV and DSM-V. Other reasons may be that prominent tension is a gateway symptom in ICD-10 but not in DSM-IV or DSM-V, and that ICD-10 permits somewhat milder gateway symptoms of anxiety and worries than DSM-IV (prominent versus excessive). Our study supports the notion that there may be two types of GAD, one with excessive worries (DSM-IV and DSM-V), and another with more fear, that is, prominent autonomic symptoms (ICD-10).[17] The findings that GAD, according to ICD-10, but not according to DSM-IV/V, was associated with an increased mortality rate and an increased rate of smoking, suggest that these diagnostic entities may even capture different disorders. Our assessment of the proposed criteria regarding DSM-V[18] and ICD-11[32] is that these differences between ICD and DSM will be even more pronounced in the future, as DSM-V concentrates more on worries and ICD-11 focuses more on free-floating anxiety,[32] that is, vegetative symptoms.

Overlap between GAD according to DSM-IV/V and ICD-10 was thus only moderate. Instead, comorbidity with depression was substantial, with 84% of those with DSM-IV GAD, 74% of those with DSM-V GAD, and 90% of those with ICD-10 GAD having a diagnosis of depression. We also found a high comorbidity with other anxiety disorders, but to a lesser extent than for depression, even if only major depression was considered, which may support the view that GAD should be included among the mood disorders. Enforcement of exclusion criteria has been suggested to lead to a lower prevalence of GAD among older adults,[1] as more comorbid disorders occur in that age group. The 1-month prevalence of "pure" GAD was rare in our study according to all criteria, a finding supported by others.[33]

The high comorbidity with depression has also been reported by others[6,27] and generated a discussion whether GAD should be included among the mood disorders in the upcoming DSM-V.[34] GAD as an entity has even been questioned because of the high rate of comorbidity.[35] However, GAD more often precedes MDD than vice versa,[35] and the comorbidity cannot be explained by overlapping symptoms.[36] It has been suggested that GAD and depression have a shared pathogenesis, including HPA axis hyperactivity[37] and genetic and family factors.[35] If so, the distinction between GAD and depression would still be meaningful.

GAD was more common in women than in men, according to both ICD-10 and DSM-IV/V, despite the low overlap between these criteria. A higher prevalence of GAD in women compared with men is supported by most studies in older[26,38,39] and younger ages.[3] Some authors suggest that the ratio between men and women decreases with age.[1] Our findings suggest that GAD is more common in women than in men, also among older adults.

STRENGTHS AND LIMITATIONS

Among the strengths of the study are the comprehensive examinations, the population-based sample, and that all participants were examined by experienced psychiatric nurses. The semistructured instrument allowed for clarifying questions. Interrater reliability regarding symptoms included in the GAD criteria was high. We excluded individuals with dementia as they cannot provide sufficient information for a diagnosis of GAD.

There are also some methodologic factors and limitations that need to be discussed. First, the criteria for GAD include a large number of symptoms according to both ICD-10 and DSM-IV. Thus, ICD-10 comprises 22 symptoms and DSM-IV 8 symptoms. The large number of symptoms used for ICD-10 makes it difficult to assess, especially in population-based studies. Second, the construction of the interview generated some loss of information, as we could not assess three of the symptoms included in ICD-10. Considering the large number of symptoms included in ICD-10, and that none of the missing symptoms were gateway or mandatory symptoms, we believe that this only marginally influenced our results. Third, some results should be interpreted with caution due to small subsamples. This is especially important in relation to the analyses on mortality and concurrent risk factors.

Fourth, the response rate (64%) was satisfactory considering the age of the sample. Fifth, although there were no differences between responders and nonresponders regarding psychiatric disorders in the Swedish Hospital Discharge Register, we cannot exclude the possibility that those who declined had more psychiatric disorders than those who participated. Sixth, since the study was cross-sectional, we cannot determine the direction of the associations reported. Seventh, we only examined 75-year-olds. We can thus not make any conclusions regarding age-related changes or regarding previous or life-time occurrence of GAD. Eighth, DSM-IV and ICD-10 diagnostic criteria were developed in clinical settings and may not be relevant in unselected populations. Ninth, our study was not conducted to make DSM-V diagnosis. It is, therefore, difficult to exactly apply these new criteria. We probably share this problem with most other studies, as the new criteria D ("Anxiety and worry are associated with one or more of 4 defined behaviors") have not been explicitly asked. We have, however, tried to make a DSM-V diagnosis on the basis of the information we have, so that those with a GAD DSM-V diagnosis most likely have at least one of the four symptoms. Tenth, the alpha version of ICD-11 includes only a general description of GAD and no detailed research criteria. We were, therefore, unable to apply these criteria to our study.

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