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Prevalence and Clinical Features of newly diagnosed Generalized Anxiety Disorder patients in Spanish Primary Care Settings: The GADAP study

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Background. Generalized anxiety disorder (GAD) is the most impairing anxiety disorder, a high percentage of patients remain undiagnosed at the primary care level. The aim of this study was to determine the clinical features of newly diagnosed GAD patients.

Method: Multicentre, cross-sectional observational study conducted in primary care settings. GAD patients were diagnosed according to the MINI psychiatric interview, and were included in the study if their score for GAD-7 was ≥ 10 . Anxiety and depression levels, and sleep disturbances were determined by HADS and MOS-sleep scales, respectively. Data regarding pharmacological treatment and healthcare resources in the previous 3 months were collected.

Results. 2,232 patients were recruited; average GAD-7 score was 14.1 ± 2.7 (mean symptom duration 32.3 ± 43.3 months). 96.9% of patients had a comorbid medical illness, with 83.9% patients suffering from pain. Psychiatric comorbidities were present in 66.4% of patients (social anxiety 37%, major depression 19.1%). HADS-depression scores rendered 28.4% and 55.9% of patients as probable and depressive cases, respectively. Patients' sleep rated 6.2 ± 1.9 on average in a 1 to 10 visual analogue scale. Only 34.9% of patients were following non-pharmacological treatment and 86.5%, 69.4% and 49.7% were treated with benzodiazepines, antidepressants and antiepileptics, respectively. The mean number of visits to the primary care physician in the previous 3 months was 5 times.

Limitations. Cross-sectional design; does not allow to infer causality.

Keywords: Generalized anxiety disorder Primary care, Treatment, Healthcare resources

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Prevalencia y síntomas del trastorno de ansiedad generalizada recién diagnosticado en los servicios de atención primaria: El estudio GADAP

Introducción. El trastorno de ansiedad generalizada (TAG) es el trastorno de ansiedad más invalidante, un alto porcentaje de pacientes permanece sin diagnóstico a nivel de atención primaria. El objetivo de este estudio fue determinar las características clínicas de los pacientes recién diagnosticados de TAG.

Método. Se llevó a cabo un estudio multicéntrico, transversal, observacional en los servicios de atención primaria. Los pacientes con TAG fueron diagnosticados según la entrevista psiquiátrica MINI, y fueron incluidos en el estudio si su puntuación en el GAD-7 fue ≥ 10 . Los niveles de depresión y ansiedad, y las alteraciones del sueño fueron determinados por el HADS y la escala de sueño MOS, respectivamente. También se recogieron los datos respecto al tratamiento farmacológico y la asistencia a los servicios de salud en los 3 meses previos.

Resultados. 2.232 pacientes fueron seleccionados; el promedio en la puntuación en el GAD-7 fue de $14,1 \pm 2,7$ (la duración del síntoma principal $32,3 \pm 43,3$ meses). El 96,9% de los pacientes tenía una enfermedad médica comórbida, con un 83,9% de pacientes que sufrían dolor. Las comor-

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bilidades psiquiátricas estuvieron presentes en el 66,4% de los pacientes (ansiedad social 37%, depresión mayor 19,1%). Las puntuaciones del HADS mostraron un 28.% de probables casos y un 55,9% de casos de depresión. Los problemas de sueño puntuaron $6,2 \pm 1,9$ de promedio en una escala analógica visual de 1 a 10. Sólo el 34,9% de los pacientes estaban siguiendo un tratamiento no farmacológico y el 86,5%, el 69,4% y el 49,7% estaban tratados con benzodiazepinas, antidepresivos y antiepilépticos respectivamente. La media del número de visitas al médico de atención primaria en los 3 meses previos fue de 5.

Limitaciones. Diseño transversal; no permite inferir causalidad.

Palabras clave: Trastorno de ansiedad generalizada, Atención primaria, Tratamiento, Recursos sanitarios

INTRODUCTION

Generalized anxiety disorder (GAD) is one of the most common mood disorders with pathological worry being its keystone feature. The diagnostic criteria for GAD as described on the Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV TR include excessive worry with duration of at least 6 months associated with at least three other symptoms among the following: restlessness, muscle tension, sleep disturbance, irritability, difficulty concentrating, and fatigue.¹ Life-time GAD prevalence has been estimated close to 6% in the United States and 3% in Europe.^{2,3}

Anxiety disorders and, in particular, GAD are very prevalent in the primary care setting, with its one-year prevalence estimated to be around 3 to 8%.⁴⁻⁶ GAD is also characterized by its high rate of comorbidity; in fact, GAD patients have a 90% likelihood of being diagnosed with at least another comorbid disease in their lifetime.^{7,8} This high rate of comorbidity makes management of GAD very challenging for the primary care physician.

Remission rates are low for GAD and it usually becomes a chronic disease, which translates on reduced functioning for these patients.⁹ In this regard, several studies have demonstrated a lower social functioning of GAD patients when compared to the general population¹⁰ and to patients of highly impairing medical conditions such as diabetes or arthritis.^{11,12} Moreover, GAD patients are among the highest users of healthcare resources. In a primary care setting, GAD patients have been shown to use up to € 970.59 in total annual costs compared to the € 547.69 used by the reference group.¹³ Also, an European study estimated the per-patient cost of GAD in € 1,804, being higher than any other anxiety disorder.¹⁴

Diagnosis of GAD patients at the primary care level is key to initiate appropriate treatment early in the disease course. However, up to 50% of mental disorders are underdiagnosed and undertreated at the primary care level.¹⁵ For GAD, one reason behind this high rate of underdiagnosis is that patients' main reason for visiting is not anxiety but other somatic complaints.⁴ As GAD usually presents psychiatric and medical comorbidities; proper diagnosis can be delayed, leading to inadequate treatment and increased costs.¹⁶ Better knowledge about the defining features of the GAD patient in the primary care setting will allow for a better management of these patients and a better allocation of healthcare resources.

The GADAP study was designed to examine the comorbidity between GAD and pain in the primary care setting. The results presented on the current manuscript come from the study aforementioned and illustrate the sociodemographic and clinical features of GAD patients at Spanish primary care settings. The GADAP study collected data related to all functioning areas influenced by GAD; thus, medical and psychiatric comorbid diseases, prevalence and intensity of insomnia and depressive symptoms. Also, data regarding healthcare resource utilization and productivity completed our study. Results from our study will help to better understand the real situation of the GAD patient at the primary care setting which will allow to plan medical training and to allocate resources in a more realistic manner.

METHOD

Study design and sample

This multicenter, cross-sectional, observational study was conducted on 447 Spanish primary care centers between April 2009 and September 2009. These centers were selected from all the 17 regions in which Spain is divided, proportionally to its population. The centers within each region were chosen for being representative of the main cities. The main aim of this was to determine the GAD and pain comorbidity at the primary care setting. Patients were recruited following a stratified multistage probabilistic sample without replacement approach. Eligible patients were men and women over 18 years of age with a GAD-7 score ≥ 10 . Exclusion criteria included previous GAD diagnosis and inability or difficulty to understand patient-reported-outcomes questionnaires in Spanish. Data collected included: demographic data, current GAD symptoms, MINI interview¹⁷, Spanish validated version of GAD-7,¹⁸ and HADS (Herrero 2003) scales, main reason for visit, sleep quality (MOS-Sleep Scale,²⁰ psychiatric and medical illnesses information, current pharmacological and non-pharmacological treatments, healthcare resource utilization, and productivity.

The study was approved by the local ethics committee and was conducted according to the Helsinki declaration. Patients were asked to give written informed consent before taking part in the study.

A total of 447 primary care physicians recruited the sample. Each participating researcher was asked to select the first 5 patients attending their surgery complaining of anxiety symptoms after the start of the study. Patients that refused to be interviewed were substituted by the following patients with anxiety symptoms. Participation in the study did not modify the usual clinical management of physicians. Sample size was calculated taking into account study's main variable: pain prevalence among GAD patients in primary care settings. A sample of 2,250 evaluable patients was estimated assuming a 30% rate of non-evaluable data and a 2-tailed 95% confidence interval to determine the prevalence of pain symptoms with an estimated error $\leq 2.5\%$.

Functional Outcome Measures

- *GAD-7 Scale*: The GAD-7 scale is an useful tool to screen for GAD symptoms developed by Spitzer,²¹ and adapted for Spain by García-Campayo.¹⁸ Only patients with a GAD-7 score ≥ 10 were included in the study.
- *HADS Scale*: This is a 14-item, self-administered scale for the diagnosis of anxiety and depression, with 2 domains (anxiety and depression), that scores from 0 (best) to 21 (worst) categorized into four severity groups: normal (0-7), mild (8-10), moderate (15-14) and severe (15-21)²², adapted for Spain by Herrero¹⁹.
- *Mini Neuropsychiatric Diagnostic Interview (MINI)*: This is a short structured diagnostic interview, developed for DSM-IV TR and ICD-10 psychiatric disorders that can be used for both psychiatrist and non-psychiatrist physicians.¹⁷ This psychiatric interview was used to confirm the psychiatric diagnosis.
- *Brief Pain Inventory-Short Form (BPI-SF)*: This is a self-administered instrument adapted for Spain to measure pain intensity and interference with daily activities. For our study, the 11-items short form was used. Each item ranges from 0 (no pain or interference) to 10 (most severe pain or complete interference).²³
- *Sleep Scale from Medical Outcomes Study (MOS-SLEEP)*: MOS-SLEEP scale evaluates the impact or interference with sleep of any disease or treatment. This scale consists on 7 subscales and 2 overall index scores. The 7 subscales are sleep disturbance (4 items), snoring (1 item), awaken short of breath or with headache (1 item), quantity of sleep (1 item), optimal sleep (1 item), sleep adequacy (2 items), and somnolence (3 items). This scale also has a

sleep problems index rated from 0 (no interference) to 100 (maximum interference) and a sleep problems subscale. Each item is rated independently with more interference scoring higher except for the sleep adequacy and quantity and optimal sleep subscales.²⁰ Patients were also asked to rate their sleep in the previous 24 hours with a visual analogue scale in which 0 was the worst sleep quality and 10, the best quality.

Statistical analysis

For statistical analysis, only patients that fulfilled all inclusion criteria and none exclusion criteria were included. Descriptive statistics were prepared for the continuous variables in the study. The Kolmogorov-Smirnov test was applied to check adjustment of data to a Gaussian distribution. Data were analyzed using SAS version 8.2 statistical software.

RESULTS

Patient characteristics

Of the patients invited to participate in the study, 41 (2%) refused. The sociodemographic characteristics of the patients who refused were similar to those of the ones included in the study. A total of 1,871 patients were finally recruited. The mean age was 52.8 years and 69% of them were women. Sociodemographic characteristics of the study sample are presented on Table 1. GAD-7 scale is a diagnostic tool specifically developed for the primary care setting. The average GAD-7 score observed in this study was 14.1 ± 2.7 , with 60.1% and 39.9% of patients presenting moderate and severe anxiety, respectively. As described in Table 1, the mean symptom duration was 32.5 ± 43.3 months with an average age for symptom onset of 50.3 ± 13.3 years.

Comorbidity

Patients were asked about the primary reason for visiting the physician at the study time. The three most frequent reasons reported by patients were pain ($n=1,558$; 72.9%), anxiety ($n=1,488$; 69.6%), and sleep disturbances ($n=1,080$; 50.5%), followed by depression, gastrointestinal disease, cardiovascular disease, diabetes, non-specified psychiatric diseases, asthma and other diseases.

Almost all patients in the study (96.9%) had a comorbid medical illness (Table 2). Chronic pain was the most frequent illness in the study sample with 83.9% patients suffering from it. Characteristics of pain in these patients will be described elsewhere. With a much lower prevalence,

Table 1	Baseline characteristics of study subjects
TOTAL	
N	1871
Gender (Female) (%)	1,298 (69.4%)
Age (years)	52.8 ± 13.8
Height (cm)	165.3 ± 8.4
Body weight (Kg)	72.6 ± 12.9
BMI (Kg/m ²)	26.5 ± 4.3
BMI classification (%)	
Normal or underweight	689 (36.8%)
Overweight	853 (45.6%)
Obesity	329 (17.6%)
Anxiety	
Severe	747 (39.9%)
Moderate	1,124 (60.1%)
GAD symptom duration (months)	32.5 ± 43.3
Age at symptom onset (years)	50.3 ± 13.3
Highest educational level (%)	
No studies	112 (6%)
Elementary school	722 (38.6%)
High school	335 (17.9%)
College or higher	702 (37.5%)
Employment status (%)	
Employed	876 (46.8%)
Unemployed	138 (7.4%)
Housewife	466 (24.9%)
Retiree	286 (15.3%)
Other	105 (5.8%)
Marital status (%)	
Single	270 (14.4%)
Married/ Living together	1,225 (65.5%)
Divorced	176 (9.4%)
Widowed	200 (10.7%)

Table 2	Reasons for visiting the primary care physicians reported by study patients
REASON	NUMBER OF PATIENTS (%)
Pain	1,558 (72.9%)
Anxiety	1,488 (69.6%)
Sleep disturbances	1,080 (50.5%)
Depression	733 (34.3%)
Gastrointestinal disease	258 (12.1%)
Cardiovascular disease	118 (5.5%)
Diabetes	114 (5.3%)
Non-specified psychiatric disease	61 (2.9%)
Asthma	44 (2.1%)
Other diseases	138 (6.5%)

gastrointestinal (34%) and cardiovascular (17.3%) diseases were second and third most frequent medical comorbidities among study patients. Regarding psychiatric comorbidities, 66.4% of study patients had a diagnosis for at least another comorbid psychiatric disease; being social anxiety (37%) and major depression (19.1%) the most prevalent ones (Table 3).

HADS scores

The HADS scale was used to assess the anxiety and depression symptoms; as expected, the mean score for the anxiety subscale was 12.2 ± 3.2 with 60.1% (N=1,124) of patients scoring for moderate anxiety and 39.9% (N=747) for severe anxiety level. Regarding depression, the mean score for the depression subscale was 11.5 ± 3.7. Six hundred and thirty five patients (28.4%) were classified as being a probable case of depression, while 1,248 patients (55.9%) were classified as depressive. More than half of patients presented mild to moderate levels of depression (29.8%; N= 557 mild, 38.8%, N=726 moderate); 29.8%, (N=557) had severe depression and only 1.1% (N=31) were considered to have normal levels.

Sleep quality

Patient mean rate of quality sleep was 6.2 ± 1.9, when measured by a visual analogue scale. Sleep quality was measured by the MOS sleep scale, being the mean sleep disturbance score 54.1 ± 14.7 and the sleep problems subscore 54.3 ± 15.1. More than half of the patients (56.9%) reported between 30 and 60 minutes sleep onset latency while the mean of hours of sleep per night in the previous 4 weeks were 5.4. As well as this, only 16.2% of patients reported having slept enough as to feel rested many times, almost always, or always. The items snoring (36.3 ± 28.3), awoken short of breath or with a headache (37.0 ± 24.6),

Table 3		Comorbidities associated with newly diagnosed GAD patients
COMORBIDITY	NUMBER OF PATIENTS (%)*	
Medical illnesses		
Chronic pain	1,701 (83.9%)	
Gastrointestinal diseases	689 (34%)	
Cardiovascular diseases	350 (17.3%)	
Diabetes	284 (14%)	
Genitourinary diseases	124 (6.1%)	
Lipid metabolism diseases	45 (2.2%)	
Bronchial disorders	39 (1.9%)	
Joint disorders	34 (1.7%)	
Thyroid diseases	30 (1.5%)	
Psychiatric diseases		
Social anxiety	750 (37%)	
Major depression	387 (19.1%)	
Phobias	283 (14%)	
Panic disorder	218 (10.7%)	
Obsessive compulsive disorder	162 (8.0%)	
Depressive disorders	24 (1.2%)	
Others	187 (9.2%)	

* Total % is higher than 100% because a single patient could present with more than one comorbid medical illnesses

Table 4		Sleep deprivation and sleep features measured by a visual analogue scale and the MOS-SLEEP scale
		MEAN SCORE (SD)*
Sleep quality (VAS)*		6.2 (1.9)
MOS-SLEEP		
Sleep disturbance		56.8 (18.1)
Snoring		36.3 (28.3)
Awaken short of breath or with a headache		37.0 (24.6)
Quantity of sleep		5.4 (1.2)
Sleep adequacy		30.3 (19.5)
DAYTIME SOMNOLENCE		41.3 (17.3)

* VAS: visual analogue scale between 0 (best possible sleep) and 10 (worst possible sleep)

sleep adequacy (30.3 ± 19.5) and daytime somnolence (41.3 ± 17.3) were also measured.

Treatment

In order to control their anxiety, patients used non-drug treatments (34.9%) and several pharmacological treatments (Table 4). The most common non-drug treatment was relaxation with an average of 5 sessions in the last three months. Regarding pharmacological treatment, benzodiazepines (86.5%, N=1,813) were the most frequently used drugs for anxiety control, followed by antidepressants (69.4%, N=1,453) and antiepileptics (49.7%, N=1,041, Table 5). Treatment with antiepileptic drugs were shorter in time (mean: 21.5 months) when compared to benzodiazepines (mean: 23.9 months), and antidepressants (mean: 28.6 months). Among other treatments used for comorbid diseases, the most frequently used agents were analgesics

(acetaminophen, 8.4%; ibuprofen, 6%; and tramadol, 3.1%) and proton pump inhibitors (omeprazol, 6.9%).

Healthcare resource utilization

As shown in Table 6, patients had visited their physician an average of 5 times in the past three months. Primary care physicians were the most visited with an average of 3 visits. Anxiety had a high impact on productivity; actually, patients reported missing almost one third of working days (28) on average in the last three months due to anxiety. Also, patients reported working with anxiety or pain an average of 62 days in the last three months.

Discussion

The results presented in this study define the key features of GAD patients not previously diagnosed and presenting with anxiety symptoms at the primary care setting. The average GAD patient before diagnosis is a female over 50 years of age with moderate anxiety that has had anxiety symptoms for almost 3 years. The main reasons for visiting the primary care physician are pain and sleep disturbances. In more than half of the cases, the patient also presents a comorbid psychiatric disease with 67% of patients being considered as depressive. Also, the average GAD patient has been treated for an average of 2 years with benzodiazepines. Finally, the newly diagnosed GAD patient

Table 5 Current treatment followed by study patients. Drug treatments are presented by pharmacological group and the 3 most frequent molecules are presented		
	Number of patients (%)	Mean number of sessions/month (SD)
Non-drug treatment	744 (34.9%)	4.8 (4.5)
Relaxation therapy	395 (18.5%)	4.8 (4.2)
Psychotherapy	186 (8.7%)	2.4 (1.8)
Cognitive-behavioural therapy	153 (7.2%)	2.7 (1.9)
Support group	132 (6.2%)	2.7 (2.0)
Other treatments	77 (3.6%)	8.4 (5.6)
Drug treatment		
Benzodiazepines	1.813 (86.5%)	
Alprazolam	737 (35.1%)	19.3 (27.9)
Lorazepam	455 (21.7%)	25.3 (41.2)
Diazepam	326 (15.5%)	18.4 (28.0)
Antidepressants	1.453 (69.4%)	
Paroxetine	292 (13.9%)	19.6 (25.3)
Venlafaxine	288 (13.7%)	14.6 (16.6)
Escitalopram	273 (13.0%)	11.0 (12.5)
Antiepileptics	1.041 (49.7%)	
Pregabalin	920 (43.9%)	6.4 (8.4)
Gabapentin	94 (4.4%)	8.7 (8.3)
Topiramate	26 (1.2%)	13.9 (14.1)
Other pharmacological treatments	699 (8.4%)	
Acetaminophen	177 (8.4%)	24.3 (32.5)
Omeprazol	145 (6.9%)	33.5 (31.7)
Ibuprofen	127 (6.0%)	16.9 (23.2)

is a high healthcare resource user and has reduced work productivity.

The sociodemographic characteristics of the sample in our study are quite similar to those of other studies conducted at the primary care level in terms of age, gender, marital status and employment.^{10, 24, 25} As well as this, our results are similar to others in the main defining features of GAD at the primary care level. Both, Kroenke²⁴ and Revicki¹⁰, have shown similar levels of anxiety in their samples as

Table 6 Healthcare resources utilization and productivity reported by study patients	
	Mean (SD)*
Physician Visits (in the last 3 months)	5.4 (4.0)
Primary Care	3.2 (2.9)
Psychologist	0.3 (2.0)
Psychiatrist	0.4 (0.9)
Emergency room	0.6 (1.5)
Hospitalization	0.1 (0.9)
Work absenteeism (missed workdays due to GAD in the last 3 months)	28.2 (19.5)
Number of days worked with anxiety or pain symptoms (in the last 3 months)	61.8 (19.5)

measured by the GAD-7 or HAM-A scales with a high percentage of patients classified as having moderate or severe anxiety. The age of onset of symptoms in our study (50.3 years) goes in line with a previous study in which the highest prevalence of GAD was observed for the middle age group (40-59 years)²⁴ and somewhat higher than the age observed by Wittchen⁴ of 33.2 years .

Newly diagnosed GAD patients visit their primary care physician for other reasons than anxiety. In our study, the most frequent reason for visiting was pain (72.9%), followed by anxiety (69.6%) and sleep disturbances (50.5%). These results may seem very different from the ones reported by Wittchen,⁴ with pain and sleep disturbances being the primary reason for visiting on 34.7% and 32.5% of GAD patients, respectively. This divergence could be explained by the fact that we collected all reasons of visiting regardless of their ranking as primary or secondary, while Wittchen⁴ recorded the main reason for visiting only. Notwithstanding, both set of results demonstrate that the GAD patient does not always present to the primary care physician due to his/her anxiety, which can contribute to the low GAD recognition observed among primary care physicians. In fact, 48% of patients with anxiety or depression have been shown to use a normalizing attribution of their symptoms²⁶ Another factor that can contribute to the low rate of anxiety reports to the primary care physician could be that some GAD patients do not believe in medication for what they consider emotional problems, as reported by 37% of GAD patients in a study comparing the care provided to GAD patients by primary care physicians to that provided by psychiatrists.²⁷

Normalizing attribution and the lack of complaint about their anxiety symptoms contribute to the low rate of GAD recognition among primary care physicians. Also, comorbid medical illnesses can contribute to the low diagnosis of GAD; in our study, up to 97% of newly diagnosed GAD patients had at least one comorbid medical illness. Chronic pain was the most frequent medical illness with more than 80% of patients suffering from it. The response to pain in patients with anxiety underlies their response to many other chronic medical conditions;²⁸ and patients with high levels of pain interference are less likely to respond to anxiety treatment. On the other hand, it has also been shown that effective GAD treatment contributes to the reduction of pain symptoms.²⁹

In our study the rate of comorbid psychiatric diseases was 69.4%, which is somewhat smaller than that previously reported for GAD patients. This could be due to different methods used and different target populations selected in every study. More surprising is the low rate of comorbid Major Depressive Disorder, only 19.1%. However, results from the HADS depression scale show that 58% of patients present moderate or severe depression symptoms (HADS-depression score > 15). Recent results have demonstrated an increased likelihood of developing major depressive episodes after the onset of GAD; since the patients included in this study were newly diagnosed of GAD, this could explain the low rate of depression comorbidity found. Sleep disturbances in our study were similar to those reported by other studies with GAD patients.^{30,31} It has been previously demonstrated that patients with insomnia are at increased risk of developing GAD;³⁰ therefore, the primary care physician should be aware of patients presenting with insomnia among other symptoms as possible cases of GAD.

Regarding treatment, most patients were following either a pharmacological or a non-pharmacological treatment to control their anxiety. Since these were newly diagnosed GAD patients, the high rate of anxiety treatment could be explained because patients were treated for what was considered a sporadic anxiety crisis. This reasoning could also explain the high use of benzodiazepines, which have been shown effective for the short term treatment of anxiety symptoms.³² However, it is important to note that these drugs are not recommended by the World Federation of Biological Psychiatry Guidelines as first line treatment for GAD, and are only recommended on patients resistant to antidepressants.³³ Also, patients in our study reported using benzodiazepines and antidepressants for at least 2 years, which could suggest lack of efficacy of the pharmacological treatment. Use of non-pharmacological treatment, such as cognitive-behavioural therapies, that have shown to be effective in controlling anxiety symptoms, were also low in our GAD patients. Our results suggest that further actions to increase awareness of GAD appropriate treatment could be implemented at the primary care level.

GAD patients have been previously shown to be high healthcare resource users. In our study, the number of primary care visits in the previous three months was similar to those reported previously.^{24, 34} Recent studies have demonstrated that proper GAD treatment of patients in psychiatric outpatient clinics significantly reduces GAD costs mainly by the reduction in visits to the primary care physician.³⁵ In fact, in our study, patients were not yet diagnosed with GAD; therefore the high number of visits to the primary care physician, and the high rate of anxiety prescriptions observed suggest that GAD is not being managed appropriately at the primary care level. Future policies should be developed to increase awareness of proper diagnosis and treatment among primary care physicians.

GAD healthcare costs are not only related to healthcare resources. Anxiety has been recently rated as fifth on work related productivity loss, behind other very impairing diseases such as depression, back pain, and arthritis.³⁶ In the mentioned study, the main driver of anxiety work related costs was presenteeism. As seen on Table 3, GAD patients in our study reported to work more days with anxiety and pain symptoms than without them. They reported as well approximately 9 missed workdays per month, which is in line with the increased likelihood to have 6 or more days of impairment for GAD patients reported by Hoffman.³⁷ These results reinforce our previous conclusion that proper treatment of GAD at the primary care level will not only reduce healthcare resource utilization but also would improve patient's quality of life and work related productivity.

Among the limitations of our study is its cross-sectional design; that does not allow to infer causality but only to show associations. Since one of the exclusion criteria was a previous diagnosis of GAD, those patients already treated for their anxiety, regardless of its efficacy, were excluded. Thus, patients with not very efficacious treatment or with relapsing episodes of GAD were excluded from this study. Therefore, the population in our study may not be representative of the whole GAD population. Given that one of the issues with GAD management is underdiagnosis, it may be considered more important to study the features of those patients not yet diagnosed in order to establish future policies aimed to reduce this population. Finally, a psychiatric structured interview was not used for the diagnosis of comorbid psychiatric diseases, which could have led to certain underdiagnosis of these comorbid diseases in our sample.

Results from our study demonstrate that GAD management at the primary care level may not be optimal. The fact that we have characterized those patients not previously diagnosed of GAD helps to describe the profile of a patient susceptible of suffering this impairing disease. Thus, primary care physicians should be aware of possible

GAD cases when examining patients with pain, sleep disturbances and depressive symptoms, together with anxiety symptoms. Also, those patients with a history of benzodiazepines or antidepressant use and that visit frequently could be susceptible of a more careful examination to detect GAD.

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