The Burden of Generalized Anxiety Disorder in Germany

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Abstract

Objective: To review studies quantifying the burden of generalized anxiety disorder (GAD) in Germany.

Methods: A review of 17 original English-language studies on the human, health care and economic burden of GAD in Germany, identified in electronic databases (MEDLINE/EMBASE: 1990-2008) and published bibliographies.

Results: Nationally representative data indicate that GAD is more prevalent in primary care (5.3%, 4-week point prevalence) than in the community (1.5%, 12-month prevalence). Although GAD commonly co-occurs with depression, the burden of GAD was not satisfactorily explained by comorbidity. Functional impairments and high rates of medical resource use observed for pure GAD were at least similar in magnitude compared with that of pure major depressive disorder (MDD). The per-patient cost of GAD in Germany (€2728, adjusted for purchase power parity in 2004) was higher than the corresponding cost of other anxiety disorders. Direct medical costs were nearly four times higher than indirect costs of sick leave. Although both disorders are burdensome in primary care, GAD was less likely than MDD to be accurately recognized and adequately treated.

Conclusions: Results from Germany underscore that GAD is a distinct, clinically relevant and costly disorder. Strategies to improve recognition and treatment of GAD have the potential to reduce the serious burden of illness (German J Psychiatry 2008; 11: 159-167).

Keywords: generalized anxiety disorder, burden, cost, quality of life, Germany

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Introduction

Generalized anxiety disorder (GAD) is a chronic psychiatric disorder. The chief feature of GAD is clinically relevant worry that occurs in combination with other emotional and physical symptoms related to chronic anxiety (World Health Organization, 1992; American Psychiatric Association, 1994). A diagnosis of GAD requires symptoms to be present for at least 6 months (World Health Organization, 1992; American Psychiatric Association, 1994), although patients typically experience symptoms for 5 to 10 years before they receive a diagnosis and treatment (Ballenger et al., 2001). The long symptom duration of GAD appears to increase its association with other health conditions (Ballenger et al., 2001), especially depression (Carter et al., 2001). An important area of research has focused on whether GAD is a distinct and independently burdensome disorder, especially as it relates to major depressive disorder (MDD). The purpose of this article is to review what is known about the unique burden of GAD in Germany from the perspective of patients, the health care system, and society. Six aspects related to the burden of GAD are reviewed: prevalence, comorbidity,
human burden, health care resource use, diagnosis and treatment patterns, and economic costs. Such information can be useful in informing local health policy decisions.

Methods

A literature search was performed in electronic databases (MEDLINE, EMBASE) for the period of January 1990 to May 2008, using the search strategy “Generalized Anxiety Disorder” or “Generalised Anxiety Disorder.” Reference lists of published articles were also searched. Peer-reviewed studies in the English-language were included if they reported original data on the human, health care or economic burden of GAD in Germany. Since diagnostic criteria for GAD have changed substantially over the years (Rickels and Rynn, 2001), we restricted this review to studies that defined GAD on the basis of current classification systems. Current classification systems include the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; American Psychiatric Association, 1994) and the International Classification of Disease, Tenth revision, Diagnostic Criteria for Research (ICD-10; World Health Organization, 1992). The diagnostic classification system used in each of the studies is shown in Table 1.

The current review describes the burden of GAD in comparison to that of other mental disorders, especially major depression (MD; the term used in this review to describe a depressive disorder classified on the basis of DSM-IV or ICD-10 criteria). Unless otherwise indicated, results of each study are reported for the total sample of patients in a particular disorder group. These disorder groups are not necessarily mutually exclusive, since most people with a mental disorder typically meet criteria for at least one comorbid mental disorder during the same period (Carter et al., 2001). This method of reporting describes the ways in which the disorders typically manifest clinically (Buist-Bouwman et al., 2006). However, to address specific questions about the extent to which impairments associated with GAD are independent from MD, investigations in Germany have also been focused on three patient subgroups: pure GAD (GAD without comorbid MD); pure MD (MD without comorbid GAD); and, comorbid GAD/MD (Wittchen et al., 2000a; Wittchen et al., 2002).

### Table 1. Prevalence estimates of GAD in Germany

<table>
<thead>
<tr>
<th>Setting/Study (reference)</th>
<th>Location</th>
<th>Diagnostic Criteria</th>
<th>N</th>
<th>Age, y</th>
<th>Prevalence estimate for total sample, % (standard error when reported)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Point 4-week 12-month Lifetime</td>
</tr>
<tr>
<td>GHS (Wittchen et al., 2000a)</td>
<td>Nationally representative</td>
<td>DSM-IV</td>
<td>4,181</td>
<td>18-65</td>
<td>-- 1.2 (0.2) 1.5 (0.2) --</td>
</tr>
<tr>
<td>TACOS (Meyer et al., 2001)</td>
<td>Lübeck</td>
<td>DSM-IV</td>
<td>4,075</td>
<td>18-64</td>
<td>-- 0.1 (0.1) 0.2 (0.1) 0.8 (0.1)</td>
</tr>
<tr>
<td>DPS (Hoyer et al., 2002)</td>
<td>Dresden</td>
<td>DSM-IV (women)</td>
<td>2,064</td>
<td>18-25</td>
<td>1.8 (1-week) -- --</td>
</tr>
<tr>
<td>EDSP (Wittchen, 2000)</td>
<td>Munich</td>
<td>DSM-IV</td>
<td>3,061</td>
<td>14-24</td>
<td>-- -- 0.5 0.8</td>
</tr>
<tr>
<td>Primary Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GAD-P (Wittchen et al., 2002)</td>
<td>Nationally representative</td>
<td>DSM-IV</td>
<td>17,739</td>
<td>≥ 16</td>
<td>5.3 (4-week)†</td>
</tr>
<tr>
<td>PPGH (Linden and Helmchen, 1995)</td>
<td>Berlin</td>
<td>ICD-10</td>
<td>400</td>
<td>18-64</td>
<td>-- 9.0</td>
</tr>
<tr>
<td>PPGH (Herr et al., 1995)</td>
<td>Mainz</td>
<td>ICD-10</td>
<td>400</td>
<td>18-64</td>
<td>-- 7.9</td>
</tr>
</tbody>
</table>

| Abbriviations: GHS, German National Interview and Examination Survey (all data in this report are from the Mental Health Supplement); TACOS, Transitions in Alcohol Consumption and Smoking; DPS, Dresden Study; EDSP, The Early Developmental Stages of Psychopathology; GAD-P, Generalized Anxiety and Depression in Primary Care study; PPGH, Psychological Problems in General Health care.

* A version of the Composite International Diagnostic Interview was used to diagnose GAD in all studies, except for the DPS study, which used the Diagnostisches Interview für Psychische Störungen – Forschungsversion and the GAD-P study, which used the Generalized Anxiety Screening Questionnaire.

† Total prevalence estimate of 5.3% was estimated by combining the prevalence of patients who met full criteria for GAD (4.0%) with those who met all criteria for GAD except for the 6-month symptom duration period (1.3%), as there were no differences between these groups.
Results

Prevalence

Prevalence estimates for GAD have been reported in both regional and national epidemiological studies (Table 1). Diagnostic and methodological differences make direct comparisons difficult. However, some overall patterns are apparent. GAD is considerably more common in primary care than in the community (Figure 1). Nationally representative studies show that while the prevalence of GAD is considerably lower than that of MD in the community, the prevalence of the two disorders is roughly equivalent in primary care (Figure 1).

Comorbidity

Comorbidity is common in people with mental disorders, including those with GAD (Maier and Falkai, 1999; Carter et al., 2001). Nationally representative data from the German National Health Interview and Examination Survey Mental Health Supplement (GHS) (Jacobi et al., 2002) showed that the majority (93%) of people with GAD in the community met criteria for at least one additional mental disorder over a one-year period, particularly MD (59%) (Carter et al., 2001). Compared to those without GAD, people with GAD had significantly higher odds of having comorbid anxiety disorders (odds ratio [OR] = 8.1, 95% confidence interval [CI] = 4.8-13.8), depressive disorders (OR = 20.3, 95% CI = 11.5-35.8); eating disorders (OR = 9.21, 95% CI = 1.9-4.3) and somatoform disorders (OR = 7.2, 95% CI = 4.2-12.1) (Carter et al., 2001). Overall, the degree and pattern of comorbidity observed for GAD was similar to those observed for MD (Carter et al., 2001). MD was more strongly associated with GAD (OR = 16.7, 95% CI = 9.8-28.6) than with any other diagnostic category considered, including dysthymia (OR = 10.2, 95% CI = 7.3-14.1) (Carter et al., 2001). Longitudinal data from two separate studies also indicated that anxiety disorders are risk factors for the first onset of MD, with GAD showing the strongest association (Wittchen et al., 2000b; Bittner et al., 2004).

Comorbidity, as assessed by two co-occurring disorders in the same individual during the last month, was also common in primary care patients with GAD. In the German portion of the WHO international study on psychological problems in primary care, GAD affected 9% of patients in Berlin, and of these, 7% had at least one other mental disorder (Maier et al., 2000). Similar results were reported in Mainz; GAD affected 8% of primary care patients, and of these, 6% had at least one other mental disorder (Maier et al., 2000). Similar to results in the community, GAD showed the strongest association with MD (OR = 17). GAD was also highly comorbid with chronic medical conditions, including coronary heart disease (OR = 2.6), hypertension (OR = 2.9) and an aggregate disorder group comprised of coronary heart disease, hypertension, asthma and diabetes (OR = 2.1). MD also showed excess comorbidity with the other mental disorder and chronic medical disorder groups (Herr et al., 1995; Linden and Helmchen, 1995; Maier and Falkai, 1999; Maier et al., 2000). Results underscore that high comorbidity is not a unique feature of GAD.
Despite high rates of psychiatric comorbidity in general, and strong associations with MD in particular, it is important to note that most patients with GAD did not have comorbid MD in the month prior to visiting primary care (Weiller et al., 1998; Wittchen et al., 2002). GAD affected 5.4% of primary care patients in a nationally representative sample, and of these, only 1.6% had comorbid GAD/MD (Wittchen et al., 2002). Similarly, pure GAD was more common than comorbid GAD/MD in Berlin (7.3% vs. 1.5%, respectively) and in Mainz (4.5% vs. 1.3%, respectively) (Weiller et al., 1998). These results underscore that MD does not fully account for high rates of primary care use observed in patients with GAD.

Human burden

Studies have quantified psychosocial and health status impairments associated with GAD using a variety of assessment instruments. Two measures were used to assess psychosocial impairment. Occupational impairment was measured by self-reported impairment days, defined as a day in which normal activities were limited or could not be performed because of symptoms (Wittchen et al., 2000a; Wittchen et al., 2002). High occupational impairment was defined as 6 or more impairment days in the past one-month period. Additionally, overall psychosocial functioning was measured by the investigator-rated Global Assessment of Functioning Scale (GAF), which is also known as Axis V of the DSM-IV multiaxial system; scores range from 1 to 100, with higher scores indicating better functioning (American Psychiatric Association, 1994). Two instruments were also used to measure self-reported health status. First, the German-language version of the SF-36 (Bullinger and Kirchberger, 1998) was used to measure different aspects of mental and physical health status. The SF-36 produces 8 subscales that measure 8 different domains of health status (scores range from 0-100, with higher scores indicating better health status) and two summary scales that measure mental and physical health status (scores are empirically derived to have a mean of 10 and a standard deviation of 10 in a representative sample of the US population) (Ware and Sherbourne, 1992). In the GHS, a poor mental and physical health status was defined by a score < 40 on the mental and physical summary scales, respectively, which is a score worse than 84% of a representative US population (Wittchen et al., 2000a). Second, overall health status was measured on a five-point categorical scale from “excellent” to “poor” (Wittchen et al., 2000a).

People with GAD have serious impairments in psychosocial functioning. Occupational impairment was commonly observed in people with GAD (Figure 2). In the community, even after adjusting for sociodemographic characteristics and psychiatric comorbidity, pure GAD was associated with significantly higher odds of having high occupational impairment compared with neither GAD nor MD (adjusted
People with GAD had a poorer health status compared with other people in the community. People with GAD had significantly lower scores on all eight health status domains assessed by the SF-36 compared with people without GAD or MD, and significantly lower scores compared with people with pure MD in the domains of general health, mental health, role functioning problems due to emotional problems and vitality (Figure 3). After adjusting for the influence of sociodemographic characteristics and psychiatric comorbidity, the odds of having a poor mental health status were significantly elevated in those with pure GAD (adjusted OR = 22.3, 95% CI = 4.0-123.8); the corresponding odds ratios were similar in magnitude for pure MD (adjusted OR = 4.18, 95% CI = 2.9-6.1) and comorbid GAD/MD (adjusted OR = 6.0, 95% CI = 2.3-15.8) (Wittchen et al., 2000a). No significant differences were observed between the three diagnostic groups and a poor physical health status. On the single-item assessment of overall perceived health status, a higher percentage of people with pure GAD (47%) described their health status as “fair or poor” compared with those with either pure MD (32%) or neither disorder (14%) (Wittchen et al., 2000a). Results suggest that health status impairments of GAD are at least similar in magnitude compared with MD. Collectively, results underscore that GAD itself is a substantially impairing disorder.

Patterns of health care use

Data on health care service use were collected in the Generalized Anxiety Disorder in Primary Care (GAD-P) study, a nationally representative study of 20,000 patients in 558 primary care practices in Germany (Wittchen et al., 2002). Patients reported on reasons for help-seeking, number of visits to primary care in the past year, number of visits to medical specialists in the past year, and history of therapy for anxiety or depression. A high rate of primary care use was defined as 4 or more visits in the past year and a high rate of medical specialist use was defined as 2 or more visits in the past year.

Primary care patients with GAD had presenting complaints that occurred significantly more often than other patients, including sleep problems (OR = 8.4, 95% CI = 6.4-11.0), pain (OR = 1.3, 95% CI = 1.1-1.6), other somatic illnesses (OR = 1.5, 95% CI = 1.3-1.8), depression (OR = 8.6, 95% CI = 6.8-11.0) and anxiety (OR = 8.0, 95% CI = 6.2-10.2) (Wittchen et al., 2002). Although patients with GAD were more likely to attribute occupational impairment in the past month to psychiatric problems than to somatic problems (Figure 2), only 13% presented with a chief complaint of anxiety. The percentage of patients with GAD who primarily sought help with anxiety was lower than that observed for other presenting complaints, including depression (16%), problems with sleep (33%), pain (35%) and other somatic complaints (48%) (Wittchen et al., 2002). These results highlight somatic presentations of GAD are more common in primary care than psychiatric presentations.

Patients with GAD are high utilizers of health care services. Sixty-eight percent of patients with pure GAD and 73% of patients with comorbid GAD/MD reported a high rate of primary care use compared with 56% of those with neither disorder (Wittchen et al., 2002). The percentage of patients with pure MD (69%) who reported a high rate of primary care use was similar to that observed in patients with pure GAD (68%). Pure GAD was associated with a significant 1.6-fold increase in the odds of having a high rate of primary care use compared with neither GAD nor MD (OR = 1.6, 95% CI = 1.4-2.0); the corresponding odds ratios were similar in magnitude for pure MD (OR = 1.7, 95% CI = 1.4-2.1) and comorbid GAD/MD (OR = 2.1, 95% CI = 1.6-2.8). These results highlight that the significant increases in primary care use observed for GAD cannot be fully explained by comorbid MD.

GAD was more strongly related to medical specialist use than MD. Forty-two percent of patients with pure GAD and 43% of patients with comorbid GAD/MD reported a high rate of medical specialist use compared with 36% of those with pure MD and 33% with neither of the disorders (Wittchen et al., 2002). Patients with GAD, whether or not they had comorbid MD, had a significant 1.5-fold increase in the odds of reporting high medical specialist use compared with patients with neither disorder (pure GAD: OR = 1.5, 95% CI = 1.2-1.7; comorbid GAD/MD: OR = 1.5, 95% CI = 1.2-2.0). Notably, pure MD was not significantly associated with a high rate of medical specialist use.

In spite of high medical resource use, most patients with GAD and/or MD did not receive treatment for their disorder(s). Less than one-quarter of patients with pure GAD (20%), pure MD (21%) or comorbid GAD/MD (22%) were currently receiving therapy (Wittchen et al., 2002). In terms of lifetime treatment rates, almost one-half (41%) of patients had never received therapy compared with 37% of those with pure MD and 30% of those with comorbid GAD/MD (Wittchen et al., 2002). These observations suggest that comorbidity increases the likelihood of receiving therapy for symptoms. They are also consistent with community-derived data which show a strong relationship between psychiatric comorbidity and increased help-seeking for an emotional or mental health problem (Jacobi et al., 2004).
Figure 3. Health status of individuals with generalized anxiety disorder (GAD) and major depression (MD) in the general population evaluated using the Short Form-36 (SF-36). Pure GAD is without comorbid MD; pure MD is without comorbid GAD. * P < 0.05 for pure MD versus comorbid GAD/MD; † P < 0.05 for pure GAD versus pure MD; ‡ P < 0.05 versus all disorders for all SF-36 domains. Data from Wittchen et al. 2000a.

Figure 4. Primary care treatment of generalized anxiety disorder (GAD) and major depression (MD). Data are from Wittchen et al. 2002 and represent a hierarchical structure of adequate treatments where only one statement is possible; antidepressants followed by psychotherapy and referral to a mental health specialist were considered to be the highest in hierarchical terms, herbal and other medications were considered to be the least adequate treatments. Pure GAD is without comorbid MD; pure MD is without comorbid GAD.
Diagnostic recognition and treatment

Data on health care service use, diagnostic recognition and treatment were also collected in the GAD-P study (Wittchen et al., 2002). Primary care physicians reported on diagnosis and prescribed therapies for each patient. The adequacy of treatment was examined using a hierarchical structure. Antidepressants were considered to be first-line treatment, followed by psychotherapy and a referral to mental health professional, with herbal and other medications considered to be the least adequate treatments in the hierarchy (Wittchen et al., 2002).

Most cases of GAD in primary care were not correctly diagnosed or treated adequately. The recognition and treatment rates for GAD were considerably lower than those observed for MD. Thirty-four percent of patients with pure GAD and 43% of patients with comorbid GAD/MD were accurately diagnosed compared with 64% of those with pure MD (Wittchen et al., 2002). Patients with GAD were also less likely to receive an adequate treatment compared with patients with MD (Figure 4). Forty-four percent of patients with pure GAD were not receiving treatment, either because the disorder was not recognized or because no treatment was provided; this percentage is higher than that observed in patients with either pure MD (38%) or comorbid GAD/MD (26%).

Economic costs

A model was designed to estimate the per-patient economic cost of brain disorders in Europe (EU member countries, Iceland, Norway and Switzerland) (Andlin-Sobocki et al., 2005). The model estimated the per-patient cost of five anxiety disorders (GAD, obsessive-compulsive disorder, panic disorder, social phobia and specific phobia) for each country and Europe as a whole. The GHS (Wittchen et al., 1998) was an important data source for estimating direct medical costs associated with hospitalization and outpatient visits and indirect costs associated with sick leave (Jacobi et al., 2002; Andlin-Sobocki and Wittchen, 2005). Economic data were transformed and converted to a defined time period and currency, adjusted for country-specific economic data for purchasing power and relative size of the economy (e.g., euros adjusted for purchasing power parity in 2004: €PPP 2004) (Andlin-Sobocki et al., 2005). Data were imputed for countries where no data were available, and epidemiological data were combined with economic data to estimate the total per-patient cost of the anxiety disorder for each country and in Europe as a whole (Andlin-Sobocki et al., 2005).

For Germany, the estimated per-patient cost (€PPP2004) of GAD was €2728, which is notably higher than the corresponding cost of any other anxiety disorder considered (ranging from €546 to €1517 for obsessive-compulsive disorder and panic disorder, respectively) (Andlin-Sobocki et al., 2005). GHS cost results, which were used to help estimate the country-specific and European costs of anxiety disorders in the model, show that the relatively high per-patient cost of GAD was primarily driven by high direct medical costs for people with GAD leave (Andlin-Sobocki and Wittchen, 2005). GHS cost results showed that the total cost (€PPP2004) per respondent with GAD was €1629; direct medical costs (€1230) were approximately four times higher than indirect costs (€399) for GAD. The opposite pattern of results was observed for panic disorder, agoraphobia and specific phobia.

Discussion

Research performed in Germany highlights that GAD is a distinct and clinically significant disorder. People with GAD were more likely to have clinically relevant worries about multiple aspects of daily life than those with other mental disorders (Hoyer et al., 2002; Becker et al., 2003). Clinically relevant worry in GAD was most commonly characterized by concerns about work, family, finances, social interactions and personal health (Becker et al., 2003). Since excessive worry is a defining feature of GAD, these observations help support the validity of the GAD diagnosis. Additional data from Germany confirm that GAD is associated with high levels of psychosocial impairment, health care resource use and economic costs. Results from studies on the prevalence, comorbidly and economic costs of GAD in Germany are largely consistent with the pattern of results from international studies that include a subset of data from Germany (Weiller et al., 1998; Alonso et al., 2004b; Alonso et al., 2004a; Andlin-Sobocki et al., 2005).

People with GAD commonly have other mental disorders, especially MD (Carter et al., 2001). However, results from German studies consistently showed that the substantial human and health care burden of GAD was not satisfactorily explained by comorbidity. Pure GAD was associated with health status impairments that were similar or even greater in magnitude compared with those of pure MD (Wittchen et al., 2000a). After adjusting for the influence of comorbid mental health conditions and sociodemographic characteristics, GAD was significantly associated with having at least 6 days in the past month in which normal activities had to be limited or could not be performed because of symptoms (Wittchen et al., 2000a). Primary care patients with GAD, both with and without comorbid MD, had significantly increased odds of having a high rate of medical specialist use compared with patients without either of the disorders, whereas those with pure MD did not (Wittchen et al., 2002). The high human and health care burden of GAD translated into high economic costs to society. For Germany, the estimated per-patient cost (€PPP2004) of GAD was €2728, which is considerably higher than the per-patient cost of any other anxiety disorder examined (Andlin-Sobocki et al., 2005). The high per-patient cost of GAD was primarily driven by direct medical costs, which were nearly four times higher than indirect costs associated with sick leave for GAD (Andlin-Sobocki and Wittchen, 2005).

The high rate of medical help-seeking observed for GAD appears to translate into poor diagnostic recognition and low rates of therapy for the disorder itself. Patients with GAD
were more likely to consult primary care with problems related to sleep, pain or other somatic illness than for anxiety (Wittchen et al., 2002). Help-seeking for an emotional problem was increased among individuals who had more than one psychiatric disorder (Jacobi et al., 2004), which likely helps to explain why patients with comorbid GAD/MD were more likely than those with either one of the disorders to have ever received therapy for symptoms (Wittchen et al., 2002). Patients with pure GAD were less likely to be accurately diagnosed or adequately treated than patients with either pure GAD or GAD/MD. This is of concern because the majority of GAD cases in primary care occurred in the absence of current MD and because the burden of pure GAD was similar in magnitude to that of pure MD (Wittchen et al., 2002). Questions about the presence of excessive worry and anxiety during the routine medical examination may help increase diagnostic recognition of GAD (Ballenger et al., 2001; Bélanger et al., 2005). In addition, public health messages may increase awareness of GAD and lead to increased help-seeking for the disorder itself (Wittchen et al., 2002).

Given the substantial burden of illness, it is encouraging that efficacious treatments for GAD are available in Germany. The World Federation of Societies of Biological Psychiatry recently published guidelines for treatment of generalized anxiety disorder (Bandelow et al., 2008). Pharmacological treatments recommended as first-line for GAD include the SSRIs (escitalopram, paroxetine and sertraline), the SNRIs (duloxetine and venlafaxine) and the calcium channel modulator, pregabalin. In patients with comorbid depression, pharmacotherapy with antidepressants is recommended (Ballenger et al., 2001). Other pharmacologic treatment options are available, but lower tolerability and side-effect profiles and inconsistent efficacy results place them as a second-line option or lower. After patients achieve remission, pharmacotherapy should be continued for several months in order to prevent relapse (Bandelow et al., 2008). Expert consensus conferences typically recommend a duration of pharmacotherapy of 12 months or longer (Allgulander et al., 2003), and a number of controlled maintenance studies with a duration of 6-12 months show that the drugs recommended as first-line treatments were more effective in preventing relapses than placebo (Bandelow et al., 2008). Cognitive behavioral therapy (CBT) is also recommended as a non-pharmacological treatment. Benzodiazepines should only be used for long-term treatment when other drugs and CBT have not been effective.

In conclusion, research from Germany underscores the importance of diagnosing and treating GAD. The high human, healthcare and societal burden associated with GAD was not adequately explained by comorbidity with MD or other mental disorders. Moreover, since GAD has been identified as a risk-factor for first onset MD, early and effective treatment of GAD has the potential to reduce the burden of MD. Patterns of health care use observed for GAD highlight the importance of interventions that are effective in treating insomnia and somatic symptoms of anxiety, the primary reasons that primary care patients seek help. These results have implications for health care policy in Germany, and suggest strategies aimed at improving recognition and treatment of MD should be extended to GAD.

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References


Bittner A, Goodwin RD, Wittchen HU, Beesdo K, Höfler M, Lieb R. What characteristics of primary anxiety


