Generalized Anxiety Disorder: Clinical Presentation, Diagnostic Features, and Guidelines for Clinical Practice

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Generalized anxiety disorder (GAD) is a prevalent and disabling disorder characterised by persistent worrying, anxiety symptoms, and tension. General practitioners and mental healthcare professionals frequently misdiagnose the presenting symptoms. This article addresses the clinical presentation of GAD and provides guidelines for discriminating GAD from other disorders, based on theoretical considerations and clinical experience. Debate relating to the validity of the definition of GAD is discussed, and suggestions are made for improving the criteria for GAD, which may guide future versions of classification systems such as the Diagnostic and Statistical Manual. © 2010 Wiley Periodicals, Inc. J Clin Psychol 67:58–73, 2011.

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Introduction

In 1980, generalized anxiety disorder (GAD) was first defined as an independent disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM) third edition (APA, 1980). It was characterized by persistent anxiety and an unspecified number of ancillary symptoms, such as apprehensive expectation and motor tension, which had to be present for at least 1 month. After the introduction of GAD in the DSM-III, nosologic issues and controversies have persisted. In an effort to improve the specificity and validity, the diagnostic criteria for GAD underwent important changes in the composition and number of required symptoms, and their minimum duration, in successive editions of the DSM (APA, 1987, 1994, 2000). In the current edition, the DSM-IV-TR (APA, 2000), excessive anxiety and uncontrollable worry about a number of events for at least 6 months are the main features of GAD. At least three of six of the following additional symptoms are required for a diagnosis: restlessness/mental tension, fatigue, poor concentration, irritability, muscle tension, and sleep disturbance. Finally, the symptoms have to lead to significant distress and impairment.

Despite the remarkable changes in the diagnostic criteria, GAD is still the anxiety disorder with the lowest diagnostic reliability (Brown, DiNardo, Lehman, & Campbell, 2001) and the diagnostic criteria continue to be debated (Weisberg, 2009). Current debate centers on the duration criterion, the addition of the qualification "excessive" to the levels of anxiety and worrying, the number of associated symptoms required for a diagnosis of GAD, and the relationship between GAD and major depressive disorder (MDD). Apart from the poor reliability and the continuing controversies about the definition, GAD is also still poorly recognized in clinical practice (Beesdo et al., 2009). Of the people who meet the diagnostic criteria for GAD that seek professional help for their symptoms, only 50%–65% are identified by their general practitioner (GP) as "psychiatric cases," and only 34% of the latter group is recognized as GAD patients (Hoyer, Krause, Hofler, Beesdo, & Wittchen, 1998; Weiller, Bisserbe, Maier, & Lecrubier, 1998). This may be because of the fact that patients with GAD often do not seek help for their anxious apprehension (Kessler, Lloyd, Lewis, & Gray, 1999),

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but rather present to their GP with general, vague, and nonspecific somatic complaints, such as sleeping problems, fatigue, nervousness, or pain in the neck and shoulders (Culpepper, 2002; Wittchen et al., 2002b). Therefore, unstructured clinical interviews in which clinicians gather information based on the main complaint presented by the patient are definitely not suitable as a diagnostic tool for GAD (Kessler et al., 1999; Wittchen et al., 2002b). Yet, clinicians have a disposal of structured clinical interviews such as the Structured Clinical Interview for DSM-IV-TR Axis-I Disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 2001) or the Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; Brown, DiNardo, & Barlow, 1994), which may guide them to make the appropriate diagnosis.

The recognition of GAD is further complicated by a high prevalence of comorbidity with other psychiatric disorders as well as with general medical conditions, both of which lead to a complex clinical presentation. Comorbity rates range from 90% for people with lifetime GAD meeting criteria for an additional axis I disorder in general population studies (Carter, Wittchen, Pfister, & Kessler, 2001) to 45%98% of patients with GAD having one or more lifetime comorbid disorders in clinical studies (Holaway, Rodebaugh, & Heimberg, 2006). Among individuals with current GAD, 66% had at least one concurrent psychiatric disorder (Wittchen, Zhao, Kessler, & Eaton, 1994). GAD is frequently comorbid with MDD and other anxiety disorders, and is also strongly associated with chronic pain conditions, medically unexplained somatic symptoms, and sleep disorders (Nutt, Argyropoulos, Hood, & Potokar, 2006). Highest among these comorbidities is MDD (Simon, 2009).

Given the high rates of comorbidity it has been questioned whether GAD is an independent disorder, or rather a prodrome, a residual or severity marker of other anxiety or mood disorders (Kessler, 2002). However, for several reasons there seems to be a basis for retaining GAD as a diagnostic category. First, GAD has established reliability and validity in its own right (see Mennin, Heimberg, Fresco, & Ritter, 2008), and noncomorbid GAD has been found to occur more frequently than assumed (Wittchen et al., 2002b). Of patients who visit their GP, 5.3% meet the criteria of GAD. In 72% of these cases, GAD is the only disorder (i.e., 3.8% of patients who visit their GP). As comorbidity was also found to be a powerful predictor of help-seeking behavior in GAD patients, it seems that comorbidity is an artifact of a "help-seeking bias" rather than a characteristic inherent to GAD (Kessler, 2002; Kessler, Chiu, Demler, Merkikangas, & Walters, 2005b).

However, as a result of the strong relationship between GAD and MDD at both genotypic and phenotypic levels, the substantial loadings on a higher order negative affectivity factor that both disorders demonstrate, and substantial symptom overlap between them (Watson, 2005; Mennin et al., 2008), there have been a number of calls to reclassify GAD in the upcoming DSM-V (expected in 2013). Proposed changes for DSM-V are as follows: (a) placing GAD together with MDD, dysthymia, and PTSD in a category of "distress disorders," one of the subclasses of the overarching class of "emotional disorders" (Watson, 2005); (b) recategorizing GAD as a mood disorder (Vollebergh et al., 2001); (c) categorizing GAD as a subtype of MDD (Kendler, Neale, Kessler, Heath, & Eaves, 1992); or (d) using a higher order factor such as neuroticism to capture both disorders (Andrews, 1996). However, removing GAD from the anxiety disorders seems to be premature because such a reclassification (a) does not fully reflect the complex relationship of GAD with both mood and anxiety disorders (e.g., despite overlapping genetic factors, GAD and MDD differ with regard to environmental factors and temporal presentations) and (2) does not fully account for the relationship between mood disorders and anxiety disorders other than GAD (e.g., MDD also has strong relationships with other anxiety disorders; Mennin et al., 2008). Thus, given the available data, this issue will be a topic of further discussion for the architects of DSM-V.

The poor recognition of GAD is a major problem for several reasons. First, based on the current DSM-IV-TR criteria, GAD is a highly prevalent disorder. With a current prevalence of 1.5%–3% and lifetime prevalence estimations ranging from 4%–7% (Kessler & Wittchen, 2002), GAD is one of the most frequently observed psychological disorders in epidemiologic studies (Lieb, Becker, & Altamura, 2005). GAD is generally considered to have a fairly chronic course (Wittchen, 2002), although recent longitudinal studies demonstrate a recurrent course for the disorder, with a chronicity rate of under 20% and even remission in a significant

proportion of the participants (Angst, Gamma, Baldwin, Ajdacic-Gross, & Rössler, 2009; Bruce et al., 2005). The disorder is associated with high severity and impairment. For instance, it was found that no other anxiety disorder had a rate of severity as high as that of GAD, including having impairment in occupational or social functioning (Kessler et al., 2005b; Sanderson & Andrews, 2002). Further, GAD was found to be associated with an impairment in life satisfaction and well-being that is (at least) comparable to that of patients suffering from other prevalent psychological disorders (Wittchen, Beesdo, & Kessler, 2002a; Lieb et al., 2005). Without treatment the prognosis is poor (Yonkers, Massion, Warshaw, & Keller, 1996; Yonkers, Dyck, Warshaw, & Keller, 2000).

Consequently, unrecognized GAD results in intensive use of healthcare facilities for a long period (e.g., Lieb et al., 2005), in which patients with GAD are confronted with unnecessary, often costly and ineffective medical examinations and treatments (Dugas & Robichaud, 2007; Wittchen, 2002). As effective treatments for GAD are available (Fisher, 2006) and a shorter time that elapses between the onset of GAD and the first treatment seems to be associated with a larger treatment effect (Altamura et al., 2008), a better recognition would allow for earlier and adequate treatment of GAD. This is an important consideration given that GAD is a strong predictor of later depressive disorder and other secondary disorders (Bruce, Machan, Dyck, & Keller, 2001; Kessler, 2002) and of therapy resistance in comorbid depression (Petersen et al., 2001). GAD also worsens the prognosis of chronic physical conditions (Ballenger et al., 2001), while successful treatment of GAD leads to a considerable reduction of comorbid symptoms (Borkovec, Abel, & Newman, 1995; Newman, Przeworski, Fisher, & Borkovec, 2010). Hence, earlier identification and treatment of GAD may not only alleviate the impairment and distress caused by this disorder and reduce the considerable claim made by GAD patients on healthcare facilities, but may also have a preventive effect on other problems and increase the effectiveness of treatments for other (comorbid) disorders. For instance, Goodwin and Gorman (2002) showed that pharmacological treatment of GAD significantly decreased the risk for subsequent onset of major depression.

This article aims to provide diagnostic guidelines for improving the recognition of GAD and effectively distinguishing GAD from other conditions in clinical practice. These guidelines are mainly based on theoretical considerations and clinical experience. However, as it has been shown that anxiety disorders and comorbid disorders are difficult to detect when evaluating patients if the diagnostic process does not include a structured clinical interview, these guidelines should be used to arrive at a diagnosis in addition to, not instead of, such clinical interviews (Simon, 2009; Zimmermann & Mattia, 1999; Zimmermann & Chelminski, 2003b). After a description of the clinical presentation of GAD, differential diagnostic issues will be addressed and illustrated with a case example. Moreover, the validity of the diagnostic criteria of GAD is discussed. In addition, implications for the forthcoming DSM-V are addressed, and suggestions for further research are provided to determine whether the suggested guidelines should be built into future diagnostic interviews.

Clinical Presentation

> Last night we went to bed and my boyfriend had a sore throat. He soon fell asleep and I listened to him snoring, and that's when it started. I was thinking, what if he falls ill and can't go to work tomorrow. Then he'll have to call in sick. But what if his throat is so sore that he can't speak, then I'll have to make the call. But who do I call? Do I call the company he's deployed at now, or do I call the company he actually works for? And what if I call the wrong company? He might get fired. And my own contract will end in 2 months … so what if they don't renew it… then we'll end up with no money and won't be able to pay for this house anymore.

The quotation above is the answer a patient gave when asked to describe a recent worrying episode. On further questioning, it turned out that such a chain of thoughts was not a one-off incident. It was typical for her way of thinking; everyday problems (here, a partner suffering

from a sore throat) result in a series of "what-if" thoughts, which eventually lead to a "disastrous" prediction (in this case, "We're going to lose our house").

Because individuals with GAD are highly sensitive to threat in general, particularly when it has personal relevance, they frequently observe possible threats (Aikins & Craske, 2001; Barlow, 2002). In response to these anticipated "dangers", fight-or-flight reactions are activated. In most anxiety disorders (such as specific phobias or social anxiety disorder), it is generally clear what needs to be escaped or avoided (e.g., spiders or social situations), but in GAD there is no clear threat from which to escape or to attack, because of the often common nature and the low likelihood of occurrence of the worrying themes that bring about anxiety (Aikins & Craske, 2001). One of the few remaining coping resources that GAD patients deploy to deal with the observed risks is to use their cognitive capabilities to find ways to avoid the anticipated danger (Borkovec, 2002). This mental strategy of trying to prevent catastrophes from happening by worrying about them is reinforced in two ways. Worrying is positively reinforced as it results in a decreased physiological and emotional response (Borkovec & Hu, 1990; Vrana, Cuthbert, & Lang, 1986), and it is negatively reinforced as the feared catastrophes generally do not come true, i.e., not many disasters actually occur on a day-to-day basis (Borkovec, Hazlett-Stevens, & Diaz, 1999). Consequently, beliefs about worrying as a helpful strategy can arise, which result in an increased use of worrying as a strategy to cope with anticipated danger. Finally, GAD patients may continuously anticipate possible problems in their mind as a result of which they seem to "live in the future" instead of living in the present (Borkovec, 2002).

Contrary to the (supposed) benefits of worrying, there is some evidence that this cognitive activity serves the same maladaptive purpose in patients with GAD as avoidance does for patients with phobias. For instance, patients with GAD mainly talk to themselves when they are worrying and are less likely to engage in imagery both at rest and during worry episodes (Borkovec & Inz, 1990; Freeston, Dugas, & Ladouceur, 1996; Rapee, 1993). As the process of creating images of potential danger would elicit more substantial negative affect and autonomic activity, it has been suggested that a verbal-linguistic kind of thinking about upcoming problems serves to avoid the negative affect associated with the threat (Borkovec, Alcaine, & Behar, 2004). As such, like any avoidance response, worry precludes emotional processing of the anxiety reaction (Borkovec, 1994). Moreover, it might lead to a strengthening of the tendency to worry (Borkovec, Robinson, Pruzinsky, & DePree, 1983) and possibly contributes to a spreading of anxious meanings to previously neutral stimuli (Thayer, Friedman, Borkovec, Johnsen, & Molina, 2000). Further, GAD patients lack the experience that the "catastrophes" they try to prevent from happening by worrying would also not have occurred if they had not worried about it. GAD patients will, thus, remain more or less trapped in "living in an illusion" (Borkovec, 2002), i.e., much time is spent thinking about things that exist only in their own mind, because they are convinced that negative events are prevented by worrying about them, and no or little attention is paid to real life because there is always a new danger that needs to be anticipated.

Differential Diagnosis: A Case Example and General Guidelines

Linda (identifying information has been changed to ensure confidentiality) is a 39-year-old woman working as a high-school teacher. She is married and has two children. She is referred to a psychologist after she called in sick at work. Linda reports being sad and hopeless. She feels tense and nervous, has problems with sleeping, and is tired all the time. She has difficulty in enjoying things and is not very interested in daily life. She worries about anything and everything, and calls herself "a real 'doom and gloom' type of a person who sees danger lurking everywhere." Examples of recent worry themes are the possible negative consequences of her calling in sick, her personal health, her upcoming 40th birthday party, and her younger brother moving house. Her complaints have increased in the last 2 years as a result of the reorganization at her work and her own change of house 2 years ago. However, Linda reports that she was often nervous and worried when she was a child. Three months before she went to consult her GP Linda called in sick at work, "because otherwise all I'll do is worry in case I

said or did something wrong." When asked whether she avoids things or does things to deal with her anxiety and worry, she reports keeping track of the schedules of seven people that are close to her. She telephones her parents, brother, sister, and two friends very often, and then casually asks them about what they will be doing in the near future. She records these activities in a diary, along with the upcoming activities of her partner, who is the other person whose schedule she tracks closely.

This example was taken from an intake interview at an outpatient treatment center. It illustrates how complicated the differential diagnosis of GAD can be. Based on this preliminary information, several diagnoses could be considered. The worrying, nervousness, feelings of tension, sleeping problems, and tiredness could be indicative of GAD, but the sad mood, fatigue, diminished interest, and lack of joy could be indicative of a depressive episode or dysthymia as well. The worries about saying or doing the wrong thing and her own health could be an example of GAD worrying, but it also might be indicative of social anxiety disorder or hypochondriasis. Further, keeping track of the schedules of seven people is a reason to screen for the presence of obsessive-compulsive disorder (OCD). However, Linda was diagnosed with only GAD. Before addressing the considerations related to this, we first continue to discuss the differences between GAD, "normal" worrying, and various other psychological disorders. Table 1 summarizes the differential-diagnostic guidelines.[1]

Many people worry from time to time, often about issues that are comparable to the themes that GAD patients worry about (Craske, Rapee, Jackel, & Barlow, 1989; Roemer, Orsillo, & Barlow, 2002). Thus, it has first to be determined whether the worrying is normal or pathological, by examining whether the worrying results in persistent symptoms and influences daily functioning.

In case the worrying is pathological, the mere presence of it is not sufficient for classifying GAD, as many patients who report clinically significant symptoms and functional impairments related to their worrying fail to meet the full criteria for GAD, particularly the associated symptoms criterion (Lawrence & Brown, 2009). Such "subsyndromal" cases are under the current DSM criteria classified as *anxiety disorder*, *not otherwise specified*. Further, worrying is not unique to GAD, but a feature of several psychological disorders (a so-called transdiagnostic process; Harvey, Watkins, Mansell, & Shafran, 2004). Compared with other disorders in which worry is prominent, the process characteristics of worrying seem to define the distinction, e.g., the frequency, number and kind of issues, and the perceived uncontrollability of the worrying. As such, assessment should be directed at these characteristics. To examine the number of issues involved, patients can be asked whether they think their worries will be over once the topic they're currently worrying about is resolved. When patients reply in the affirmative, GAD is likely not warranted, as the worrying of GAD is by definition concerned with more than one topic. In clinical practice, patients with GAD typically reply to this question by stating that they expect there will soon be another thing to worry about, once their current worry issue is over. In such cases, further GAD symptoms must be probed for, to either confirm or rule out the diagnosis.

The kind of themes patients worry about can be helpful in distinguishing GAD from other anxiety disorders. More specifically, worrying about minor, everyday life events is very characteristic of GAD patients, as almost all of them respond "yes" to the question "Do you worry excessively about minor things?" compared with approximately 50% of patients diagnosed with another anxiety disorder (Sanderson & Barlow, 1990). Thus, a negative reply to this question is an indication that GAD might be ruled out. A final process characteristic that should be screened for is the perceived uncontrollability of the worrying. As the uncontrollability of worrying is a defining characteristic of GAD (APA, 2000), the diagnosis is ruled out when patients think of their worries as controllable. However, this does not imply that in other disorders worrying is simply viewed as annoying, but controllable (see Harvey et al., 2004). Hence, when patients report having difficulty in controlling their worrying, further screening is needed to arrive at the diagnosis at hand. Therefore, specific guidelines for distinguishing GAD from other diagnosis are provided below.

[1]These differential-diagnostic considerations are partly based on Dugas and Robichaud (2007).

Table 1
Differential-Diagnostic Considerations for Generalized Anxiety Disorder (GAD)

GAD 1. Persistent symptoms resulting from the worrying 2. Functioning severely impaired by the worrying	Normal worrying 1. No persistent symptoms 2. Functioning not (severely) limited
GAD 1. Worrying about minor, everyday life events 2. Worrying about transient, shifting issues	Other anxiety disorders in general 1. Worrying about one or some major issues 2. Worrying largely about an invariant stimulus, mostly concerning the specific disorder
GAD 1. Symptoms have been present for at least 6 months 2. Worrying is perceived as uncontrollable	Adjustment disorder 1. Symptoms have lasted for less than 6 months 2. Worrying is perceived as controllable
GAD 1. Anxiety attacks interpreted as indication that worrying is threatening/harmful 2. No agoraphobic avoidance behavior	Panic disorder 1. Symptoms interpreted as indicative of fainting, losing one's mind, heart attack, loss of control or dying 2. Often agoraphobic avoidance behavior
GAD 1. Compulsive behavior focused on relational situations and achievement 2. Compulsive behavior serves to prevent worrying 3. Concerns about realistic, common issues 4. Worrying mainly verbal-linguistic 5. Worrying is perceived as egosyntonic; often an ambivalent attitude towards worrying 6. Content of worrying is dynamic	Obsessive-compulsive disorder 1. Compulsive behavior focused on objects 2. Compulsive behavior serves to avert danger 3. Obsessions often considered as strange or inappropriate 4. Obsessions also in images 5. Obsessions are perceived as obtrusive, undesirable and egodystonic 6. Obsessions have a static content
GAD 1. Focus of worrying varies 2. Little to no avoidance of (social) situations 3. Functioning impaired as a result of the worrying	Social phobia 1. Focus of worrying is always negative assessment and/or embarrassing behavior 2. Avoidance of social situations as much as possible 3. Functioning hampered as a result of the avoidance behavior
GAD 1. Sometimes associated with exposure to a traumatic event 2. No re-experiencing symptoms	Post-traumatic stress disorder 1. By definition caused by a traumatic event 2. Presence of re-experiencing of the traumatic event
GAD 1. Fear of contracting a disease 2. Worrying pertains to ever-changing, common issues 3. Alerted to physical sensations only periodically 4. Little to no monitoring of the body, and if so, only periodically 5. Medical examination reassures	Hypochondriasis 1. Convinced of having a disease 2. Worrying always pertains to health 3. Alerted to physical sensations continuously 4. Monitoring of the body 5. Medical examination will reassure briefly if at all
GAD 1. Worrying may be present at any time 2. Worrying about transient, shifting issues 3. Complaints are perceived as the result of worrying	Insomnia 1. Worrying typically in the evening 2. Worrying about the sleeping problems or consequences of these problems 3. Complaints are perceived as the result of not sleeping

Table 1
Continued

GAD	Somatization disorders
1. Predominance of anxiety	1. No, or mild, anxiety
2. Worrying about transient, shifting issues	2. Recurrent thinking about causes and consequences of physical complaints
GAD	Mood disorders
1. Muscular tension complaints in neck and shoulders	1. Little to no muscular tension complaints in neck and shoulders
2. Worrying concerns future events	2. Ruminating on the past
3. Aimed at avoiding or preventing danger ("what if?")	3. Aimed at establishing understanding and meaning ("why?")
4. Predominance of feelings of anxiety	4. Predominance of depressed mood
5. Absence of anhedonia	5. Presence of anhedonia

Differential Diagnosis: Specific Guidelines

When structured clinical interviews are used in clinical practice, most DSM-IV-TR Axis-I disorders (APA, 2000) can be reliably distinguished from GAD by their defining characteristics and the process characteristics described above (see Scott & Sembi, 2006; Zimmermann & Mattia, 1999). But even if structured interviews are used in cases where worry is prominent, it still can be difficult to assess whether a patient suffers from GAD, from another psychological disorder, or from comorbid GAD. Therefore, specific guidelines are described that are based on clinical experience and on theoretical considerations from the published literature.

First, in response to a clear stressor (such as a conflict at work or an argument with a relative), patients may present with being nervous and worried and feeling tense. Such symptoms are defining characteristics of an adjustment disorder, but they are also very similar to symptoms that define GAD. The difference with GAD is that the symptoms of an adjustment disorder by definition may not exist for longer than 6 months after the stressor (or the consequences of the stressor) has disappeared, whereas the GAD symptoms have to be present for at least 6 months (although this criterion has been debated, as will be further discussed in the Discussion section). However, in some cases, this time criterion does not provide clarity, particularly if it takes a long time for the stressor (or its consequences) to subside. For example, the stressor "being in debt" can lead to debt support with payment schemes continuing for many years, which may result in the patient having to live on a limited budget for a long time. This, in turn, may lead to years of worrying about various common issues, e.g., whether there will be enough food, whether the children can go on their school's outing, or whether bills can be paid on time. In addition to the fact that all these concerns can be traced back to the consequences of one and the same stressor, patients with an adjustment disorder do not (or hardly) perceive the worrying as uncontrollable.

Further, as with other anxiety disorders, GAD can result in anxiety/panic attacks. These attacks may in fact be the reason for patients to seek professional help, as a result of which a diagnosis of panic disorder seems obvious. The main difference seems to be the focus of the fear. While patients with a panic disorder are afraid of passing out, losing control, going crazy, getting a heart attack, and/or dying, patients with GAD think of the anxiety attacks mainly as an indication that the worrying is not good for them and that (in the future) they may get heart problems as a result of the continuous worrying. Further, patients with panic disorder often show agoraphobic avoidance, whereas patients with GAD do not (or hardly ever) show such behavior.

The distinction between OCD and GAD can be complicated by the obsessions as well as the compulsions. In most cases, compulsive behavior is indicative of OCD. However, patients with GAD are also known to engage in checking behaviors. A main difference is the focus of the checking behavior. Patients with OCD tend to focus their checking on objects, whereas GAD

patients tend to focus their checking on relational situations and achievement (Coleman, Pietrefesa, Hollaway, Coles, & Heimberg, 2009). Furthermore, in OCD the behavior is performed to avert danger (e.g., contamination), whereas GAD patients seem to use checking behavior as a strategy to avoid (a) triggers that might start the worrying process or (b) affective experiences (Schut, Castonguay, & Borkovec, 2001). Obsessions more often complicate the differential diagnosis between GAD and OCD, especially in the absence of compulsions. A number of guidelines may be useful to distinguish obsessions from worrying (Dugas & Robichaud, 2007). The worrying of GAD patients often concerns realistic, everyday matters (e.g., health, performance at work, the household, and relationships), whereas patients with OCD often think of their obsessive thoughts as strange or inappropriate, especially if these pertain to aggressive, blasphemous, or sexual themes. As a result, obsessions are often considered to be undesired, as opposed to worrying, which is seen as more egosyntonic and less undesirable. Moreover, many GAD patients have an ambivalent attitude towards their worrying, as is reflected in the positive and negative beliefs they hold about worrying (Wells, 1995). Another difference is that obsessions may occur as vivid images, whereas worrying is mainly verbal-linguistic in nature (Borkovec, 1994). Perhaps the most distinctive item is the static content of obsessions as opposed to the dynamic content of worrying. Whereas OCD patients report that they experience the same intrusion over and over again, GAD patients worry about a wide variety of issues, and the worrying is perceived more as a developing scenario.

Patients with social anxiety disorder (SAD) may also present with anxiety and concerns about various situations, such as parties, meetings, hobbies and sports clubs, lively places, and face-to-face conversations (Heimberg, 1995). The concerns and the multitude of situations appear to be similar to GAD. Probing for the underlying fear can be helpful to distinguish GAD from SAD. In the case of SAD, the focus will always be the fear of being judged negatively or behaving in an embarrassing or humiliating manner (Dugas & Robichaud, 2007). Although GAD patients may have similar concerns from time to time, they also report various other concerns. A final distinctive feature concerns the avoidance behavior: Patients with SAD avoid the situations that they fear as much as possible, and it seems to be primarily this avoidance behavior that disrupts their social and/or professional functioning. Patients with GAD at times report that they also try to avoid (social) situations or events that could lead to worrying, but their suffering is mainly the result of their excessive and uncontrollable worrying.

Worry-like processes, such as dwelling on past traumatic event(s), are a feature of post-traumatic stress disorder (PTSD) and have been conceptualized as a factor in the escalation and persistence of this disorder (Wells & Matthews, 1994). A first distinction is that PTSD is by definition caused by exposure to a traumatic event, whereas GAD is not. However, several studies indicate that exposure to trauma, particularly assaultive trauma, is associated with GAD (Brawman-Mintzer, Monnier, Wolitzky, & Falsetti, 2005; Ghafoori et al., 2009; Roemer, Molina, Litz, & Borkovec, 1997). Inquiring about the presence of re-experiencing symptoms, the second main characteristic of PTSD, is, therefore, indicated when patients report that they have experienced a trauma and are worrying about the trauma and future negative events.

Although patients who suffer from hypochondriasis worry about illness-related topics but not about general issues (Bouman & Meijer, 1999), their persistent concerns for their own health can be reminiscent of GAD (Wells & Hackmann, 1993). Based on clinical experience, the main distinction seems to be whether patients fear that they will get a serious disease (GAD) or whether they are convinced they already suffer from it (hypochondriasis). Further, patients with hypochondriasis seem to be inclined to pay attention to slight physical changes, which are considered to be evidence of a serious disease, and regularly check their body for indications of a serious disease. Like patients with hypochondrias, people with GAD also regularly visit their GP, but mainly to discuss physical symptoms that result from their worrying rather than to seek reassurance about whether they have a serious disease. Moreover, if the concerns of GAD patients pertain to their health, then they often report that a medical examination leads to reassurance, whereas most hypochondric patients do not.

People with insomnia often contribute their sleep disturbance to intrusive thoughts or a racing mind (Harvey, 2000, 2001). As it has been found that the presleep cognitive activity of patients with insomnia is focused on several topics, such as solving problems and general worries, and as sleeping problems are a diagnostic feature of GAD (APA, 2000), it may be difficult to distinguish GAD from insomnia. However, three characteristics may be helpful in defining the difference in clinical practice. First, the worrying of patients with insomnia typically starts in the evening, when patients think of going to bed. Further, the focus of the worrying is almost always the sleeping problems, or related to that topic. For example, when worrying about unsolved problems, patients with insomnia often report that they are afraid that they cannot sleep if they do not solve the problem at hand, whereas GAD patients think of all kinds of disasters that can happen if they do not solve such a problem. A final difference is that patients with insomnia think their complaints are the result of not sleeping, whereas GAD patients see the worrying as their main problem.

Somatization disorders, particularly undifferentiated somatoform disorder, may overlap with GAD and be difficult to distinguish diagnostically. The main difference is the presence and particularly the predominance of anxiety symptoms in GAD, which is not typical of somatization disorders (Rickels, Rynn, & Khalid-Khan, 2002). Further, when somatization patients report problems of recurrent thinking, they mainly ruminate about the (possible) causes of their physical complaints and/or worry about their possible consequences.

As already mentioned in the introduction, given their high rate of lifetime comorbidity, shared genetic factors, and the overlap in diagnostic criteria, debate is ongoing about whether GAD and MDD should be classified as distinct disorders in the upcoming DSM-V. As a result of these commonalities, MDD may be the most difficult disorder to distinguish from GAD. In clinical practice, especially the overlap in somatic symptoms, the tendency to ruminate, which resembles the worrying of GAD patients, and the presence of a depressed mood complicate the differential diagnosis. As for the somatic symptoms, only the experience of muscle tension (in particular in neck and shoulders) has been found to be specific to GAD (Joormann & Stöber, 1999).

More important with respect to the differential diagnosis is the thinking style, as worrying is one of the main features of GAD. A first distinction is the focus in time of the repetitive thoughts. GAD patients usually focus on negative things that might happen in the future with the aim to avoid or prevent danger, whereas depressive patients predominantly ruminate about negative things that have happened in the past in an attempt to establish understanding and meaning (Wells, 2009). Stated in a different way, the thinking of worriers is characterized by a chain of "what if?" questions and of depressive patients by "why?" questions (Watkins & Baracaia, 2001). However, this difference can be misleading, as sometimes worrying also concerns negative past events (Dugas & Robichaud, 2007). An example of this would be a patient who is continuously worrying about a mistake he made at work some time ago. Although it is about a negative event that actually did take place, the question is whether the patient ruminates about the event as (yet) another example of his failure ("why?"), or whether he worries about the possible negative consequences of his mistake in the future, e.g., a negative job appraisal or dismissal ("what if?").

A final differential diagnostic problem is the presence of a depressed mood, because GAD patients often also report that they feel sad. However, the key characteristic of GAD with respect to mood is the feeling of anxiety. Thus, when patients report becoming depressed as a result of their negative thinking, this seems indicative of a mood disorder. Further, when patients report to feel both anxious and depressed, it may be helpful to find out whether patients are anhedonic, as low positive affect has been found to be characteristic of MDD, but not of GAD (Krueger, 1999). Furthermore, the clinician can ask whether patients think their worrying about future negative events is the problem or their sad mood. Patients with GAD commonly report that they think that if their worrying would be treated successfully, their sadness will be over.

In Linda's case, the diagnosis of GAD was established. A mood disorder was ruled out for several reasons. The worrying turned out to mainly concern negative events that might occur in the future, even in the case of worrisome thoughts she had about mistakes or wrong comments she made at work. She was not ruminating on how silly she had been and why she

acted this way, but rather what the consequences of such an error or comment might be: "I'll be reprimanded by my boss and miss out on my salary raise, or my colleagues might think I'm stupid... and what if my mistake caused damage for my employer... then I'll be fired!" Further, she felt that her sleeping problems appeared to be related to her worrying, which started as soon as she relaxed. Finally, she did not meet other important criteria of MDD. Her feelings of sadness and her difficulty to enjoy things were only periodically present. Further, her appetite was unchanged, her weight remained stable, and she reported no significant feelings of guilt or worthlessness. Finally, Linda did not think of death or suicide, and had no suicidal ideation. Although some of Linda's scenarios concerned the fear of being judged negatively by others, one reason for not diagnosing her with SAD was that she hardly avoided social situations. Linda did call in sick at work, but she did this in order not to worry about (mistakes she made at) work and not so much to prevent a possible negative judgement by her colleagues. Moreover, her calling in sick led to further worries about its potential consequences. Another reason for not diagnosing her with a social phobia was the fact that Linda did not view social situations as problematic per se. Although she was concerned about social situations at the time of the intake interview, she thought that when these worries were over she certainly would find something else to worry about, as was always the case. Further, although she reported worries about her health, hypochondriasis was excluded as Linda did not prove to be preoccupied with having a serious disease or illness. She was only sometimes afraid of getting a serious disease, and could be reassured about not having such a disease relatively easily. OCD could be ruled out by tracing the function of her behavior. Linda reported that if she would not keep track of the schedule of those seven people, she would worry about what might have happened to them if she would not be able to reach them on the phone or at home one day. As long as she knew where everyone was, she could prevent ending up in a scenario of catastrophic thinking. Finally, Linda did not report to have experienced a traumatic event, and as such the diagnosis of PTSD was ruled out.

Controversies Surrounding the Diagnostic Criteria of GAD

It should be noted that the guidelines described above emerged from the GAD criteria as presented in DSM-IV-TR (APA, 2000), the validity of which is still questioned despite considerable modifications in the criteria since the introduction of GAD in the DSM-III (APA, 1980). Current controversies predominantly relate to the criteria for duration and excessive worry. With regard to the first, several studies could not confirm the 6-month criterion as being clinically meaningful (Angst et al., 2006; Bienvenu, Nestadt, & Eaton, 1998; Kessler et al., 2005a). No significant differences in work impairment, distress, and comorbidity were found between groups of patients with generalized anxiety syndromes defined by varying duration (Angst et al., 2006). This suggests that the DSM-V classification could identify a clinically significant GAD even if the duration threshold is lowered (Andrews et al., 2010). However, future research is needed to investigate whether such a reduced duration will reduce the discriminant validity of GAD relative to normative anxious reactions to life events or to adjustment disorders. As for the excessive worry criterion, excessiveness is a rather ambiguous term and there is no clear guidance on defining worry as excessive (Ruscio et al., 2005). The elimination of the additive "excessive" from the criteria could be associated with an increase in inter-rater reliability and does not seem to substantially change the type of person identified as having GAD, as excessive and nonexcessive worriers who meet all other DSM-IV-TR criteria for GAD have been shown to differ only in terms of the onset and the severity of the symptoms (Wittchen, Kessler, Zhao, & Abelson, 1995). In the meantime, if the excessiveness criterion would be omitted from the GAD definition in DSM-V, the classification would identify a milder form of the disorder, and the prevalence of the disorder would increase substantially (Andrews et al., 2010). Therefore, it seems most beneficial for the classification of GAD to provide further details on what excessive actually means (e.g., an operationalization in terms of the amount of time per day spent on worrying).

The debate is further concerned with the number of associated symptoms that are needed for making the diagnosis. Currently, three of six symptoms are required, but it is not

well-established whether this is the optimal subthreshold (Weisberg, 2009). Although several authors have suggested that a change in the number of symptoms could improve the specificity of the diagnosis (Bienvenu et al., 1998; Rickels & Rynn, 2001), it was recently found that requiring only two associated symptoms had little effect on the prevalence of GAD in community samples (Ruscio et al., 2007). If changing the number of associated symptoms has little effect on the prevalence of the disorder, then there seems little point in retaining this criterion for diagnosing GAD. It may be preferable to focus on the presence of certain symptoms, such as restlessness, feeling keyed up, and muscle tension, which seem to be endorsed by most people who meet the DSM-IV-TR criteria for GAD (Andrews et al., 2010). However, it remains to be investigated whether these specific symptoms indeed increase or at least maintain the discriminant validity of the GAD diagnosis as compared to other anxiety or mood disorders.

A final point of debate pertains to the supposed hierarchy in the DSM-IV-TR criteria of GAD (APA, 2000), which is likely a conceptual remnant of GAD's residual status in DSM-III (Andrews et al., 2010). Recent studies could not confirm the validity of the criterion that GAD may not occur exclusively during the course of a mood disorder, as no differences could be found between patients with MDD and comorbid GAD, and patients with GAD exclusively within the course of MDD (Lawrence, Liverant, Rosellini, & Brown, 2009; Zimmermann & Chelminski, 2003a). Moreover, instead of promoting diagnostic parsimony, the hierarchical exclusion criterion seems to result in the false exclusion of patients from the GAD diagnosis (Lawrence et al., 2009). Therefore, it has been suggested to reconsider the utility of the hierarchical criteria for DSM-V.

Interestingly, the second main criterion of GAD, i.e. having difficulties controlling the worrying, has been hardly questioned. The perception of control over worry is negatively associated with anxiety, i.e., the more control individuals perceive over their worry, the fewer anxiety symptoms they report (Rapee, Craske, Brown, & Barlow, 1996). Moreover, rather than the worrying itself, negative beliefs about worrying appear to be a distinguishing characteristic of GAD (Ruscio & Borkovec, 2004). In terms of their beliefs about the uncontrollability of their worrying, GAD patients were found to be significantly different from nonanxious and anxious individuals who do not worry. Further, negative beliefs about worrying seem to determine the difference between worriers who do and worriers who do not meet the GAD criteria (Davis & Valentiner, 2000; Ruscio & Borkovec, 2004; Tallis, Davey, & Capuzzo, 1994). As such, it has been suggested that this subjective interpretation of worrying might be the most important feature of GAD (Ruscio & Borkovec, 2004). As negative beliefs about worrying do not exclusively concern the uncontrollability of worrying but also the harmful consequences of worrying (Wells, 1995), this criterion might be extended as follows: "the person finds it difficult to control the worry *and/or thinks worrying is harmful or dangerous*." However, it should be noted that the contribution of the difficult-to-control criterion to the classification of GAD might be explained by the excessiveness criterion, as it appears that a worry cannot be excessive but still controllable. Further, it has recently been found that if this criterion was omitted in DSM-V, it would have little impact on the prevalence rates in community samples (see Andrews et al., 2010). As data on this issue are sparse, it needs to be examined whether this criterion can be omitted, needs to be altered (e.g., adding beliefs about the dangers of worrying, or replacing the beliefs about uncontrollability by beliefs about the dangers), or has to be left unchanged in DSM-V. An important consideration with respect to this decision should be whether the beliefs about the uncontrollability and/or dangerousness of worrying do help distinguish GAD from other anxiety and mood disorders and from healthy controls.

The difficulties in diagnosing GAD may also reflect the limitations of a categorical diagnostic system, such as the DSM, in which cut-points are provided on dimensional data. As several researchers have noted that many patients fail to meet full criteria for GAD, but nevertheless experience clinically significant symptoms and have similar levels of functional impairment to those with the disorder (Kessler et al., 2005a; Lawrence & Brown, 2009), the current DSM criteria for GAD might be too restrictive and, therefore, fail to provide adequate coverage for the range of symptom presentations associated with worry. As this threshold problem is not

unique to GAD (Lawrence & Brown, 2009; Pincus, Davis, & McQueen, 1999), and several other diagnostic categories might also be excessively restrictive (e.g., Stein, Walker, Hazen, & Forde, 1997), it has been suggested that dimensional elements (e.g., clinical severity ratings) should be adopted in future editions of the DSM to acknowledge the dimensional nature of disorder features and improve diagnostic reliability (Brown & Barlow, 2005). However, as yet it has to be investigated at what level such elements should be incorporated in the current diagnostic system (e.g., dimensional severity ratings for the existing DSM disorder constructs or dimensional assessment of higher order constructs, which are not currently recognized by the DSM, such as temperament, personality, and genetics; Brown & Barlow, 2005).

Discussion

GAD is a highly prevalent disorder, which is associated with persistent suffering and considerable impairments. If left untreated, the prognosis is poor. Unfortunately, because the diagnosis of GAD is poorly recognized, GAD patients do not receive adequate treatment. As effective treatments are available (Fisher, 2006), the misdiagnosing of GAD contributes to unnecessary suffering and claims on mental healthcare facilities. One problem is the high comorbidity, which significantly lowers the probability that GAD is successfully diagnosed and treated (Wittchen et al., 2002b). Therefore, in this article, clinical guidelines are provided, which may contribute to the successful identification of GAD. However, these guidelines emerged from the DSM-IV-TR (APA, 2000) criteria for GAD, which are currently surrounded by considerable debate. These controversies are described in this article, as well as suggestions to solve them. However, based on the currently available evidence, none of these issues can be solved, so further research is needed to assess whether these suggestions will improve the specificity, validity, and reliability of the diagnosis of GAD, or whether it may prove better to leave the criteria for GAD unchanged. The same is true for the diagnostic guidelines as provided in this article. As most of them are based on clinical experience, these guidelines should be examined before the publication of the DSM-V to determine whether they should be adapted into future versions of structured diagnostic interviews (e.g., the SCID-I) instead of supplementing them, as suggested in the introduction. For instance, future research could examine whether absence of anhedonia is in fact an important factor in distinguishing GAD from depressive disorders.

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