

Generalized Anxiety Disorder (GAD) AND Obsessive-Compulsive Disorder (OCD)

Generalized anxiety disorder (GAD) is an anxiety disorder characterized by excessive, uncontrollable and often irrational worry about events or activities. This excessive worry often interferes with daily functioning, and sufferers are overly concerned about everyday matters such as health issues, money, death, family problems, friendship problems, interpersonal relationship problems, or work difficulties. Symptoms may include excessive worry, restlessness, trouble sleeping, feeling tired, irritability, sweating, and trembling.

Genetics

Genes are attributed to about a third of general anxiety disorder's variance. Individuals with a genetic predisposition for GAD are more likely to develop GAD, especially in response to a life stressor.

Substance-induced

Long-term use of benzodiazepines can worsen underlying anxiety, with evidence that reduction of benzodiazepines can lead to a diminishment of anxiety symptoms. Similarly, long-term effects of alcohol consumption is associated with anxiety disorders, with evidence that prolonged abstinence can result in a disappearance of anxiety symptoms. However, it can take up to two years for anxiety symptoms to return to baseline in about a quarter of people recovering from alcoholism.

In one study in 1988–90, illness in approximately half of patients attending mental health services at British hospital psychiatric clinics, for conditions such as panic disorder or social phobia, was determined to be the result of alcohol or benzodiazepine dependence. In these patients, anxiety symptoms, while worsening initially during the withdrawal phase, disappeared with abstinence from benzodiazepines or alcohol. Sometimes anxiety pre-existed alcohol or benzodiazepine dependence, but the dependence was acting to keep the anxiety disorders going and could progressively make them worse. Recovery from benzodiazepines tends to take a lot longer than recovery from alcohol, but people can regain their previous good health.

Tobacco smoking has been established as a risk factor for developing anxiety disorders. Neurotransmitter systems, inflammation, oxidative stress, mitochondria dysfunction and neurogenesis are affected by exposure to cigarette smoke which are all pathways thought to be associated with GAD. Excessive caffeine use has also been linked to aggravating and maintaining anxiety. This is due to over activation of the sympathetic nervous system.

Other

Populations with a higher rate of diagnosis of GAD include individuals with low and middle socio-economic status and those who are separated, divorced, unemployed, widowed or have low levels of education.

African Americans have higher odds of having GAD and the disorder often manifests itself in different patterns.

GAD is also common in the elderly population.

Low self-esteem, disrupted family environments and sexual abuse also increase the risk of GAD

Pathophysiology

Amygdala (in red) brain structures linked to anxiety disorders

Generalized anxiety disorder has been linked to disrupted functional connectivity of the amygdala and its processing of fear and anxiety.^[29] Sensory information enters the amygdala through the nuclei of the basolateral complex (consisting of lateral, basal and accessory basal nuclei). The basolateral complex processes the sensory-related fear memories and communicates their threat importance to memory and sensory processing elsewhere in the brain, such as the medial prefrontal cortex and sensory cortices.

Another area, the adjacent central nucleus of the amygdala, controls species-specific fear responses in its connections to the brainstem, hypothalamus and cerebellum areas. In those with generalized anxiety disorder, these connections seem less functionally distinct, and there is greater gray matter in the central nucleus. Another difference is that the amygdala areas have decreased connectivity with the insula and cingulate areas that control general stimulus salience, while having greater connectivity with the parietal cortex and prefrontal cortex circuits that underlie executive functions. The latter suggests a compensation strategy for dysfunctional amygdala processing of anxiety. This is consistent with cognitive theories that suggest the use in this disorder of attempts to reduce the involvement of emotions with compensatory cognitive strategies.

Diagnosis

DSM-5 criteria

The diagnostic criteria for GAD as defined by the Diagnostic and Statistical Manual of Mental Disorders DSM-5 (2013), published by the American Psychiatric Association, are paraphrased as follows:

- A. Too much anxiety or worry over more than six months. This is present most of the time in regards to many activities.
- B. Inability to manage these symptoms
- C. At least three of the following occur:
Note: Only one item is required in children.
 1. Restlessness
 2. Tires easily
 3. Problems concentrating
 4. Irritability
 5. Muscle tension.
 6. Problems with sleep
- D. Symptoms result in problems with functioning.
- E. Symptoms are not due to medications, drugs, other physical health problems
- F. Symptoms do not fit better with another psychiatric problem such as panic disorder

No major changes to GAD have occurred since publication of the Diagnostic and Statistical Manual of Mental Disorders (2004); minor changes include wording of diagnostic criteria.¹

ICD-10 criteria

ICD-10 Generalized anxiety disorder Note: For children different criteria may be applied

- A. A period of at least six months with prominent tension, worry, and feelings of apprehension, about everyday events and problems.
- B. At least four symptoms out of the following list of items must be present, of which at least one from items (1) to (4).

Autonomic arousal symptoms

- (1) Palpitations or pounding heart, or accelerated heart rate.
- (2) Sweating.
- (3) Trembling or shaking.
- (4) Dry mouth (not due to medication or dehydration).

Symptoms concerning chest and abdomen

- (5) Difficulty breathing.
- (6) Feeling of choking.
- (7) Chest pain or discomfort.
- (8) Nausea or abdominal distress (e.g. churning in the stomach).

Symptoms concerning brain and mind

- (9) Feeling dizzy, unsteady, faint or light-headed.
- (10) Feelings that objects are unreal (de-realization), or that one's self is distant or "not really here" (depersonalization).
- (11) Fear of losing control, going crazy, or passing out.
- (12) Fear of dying.

General symptoms

- (13) Hot flashes or cold chills.
- (14) Numbness or tingling sensations.

Symptoms of tension

- (15) Muscle tension or aches and pains.
- (16) Restlessness and inability to relax.
- (17) Feeling keyed up, or on edge, or of mental tension.
- (18) A sensation of a lump in the throat or difficulty with swallowing.

Other non-specific symptoms

- (19) Exaggerated response to minor surprises or being startled.
- (20) Difficulty in concentrating or mind going blank, because of worrying or anxiety.

(21) Persistent irritability.

(22) Difficulty getting to sleep because of worrying.

C. The disorder does not meet the criteria for panic disorder, phobic anxiety disorders, obsessive-compulsive disorder or hypochondriacal disorder).

D. Most commonly used exclusion criteria: not sustained by a physical disorder, such as hyperthyroidism, an organic mental disorder or psychoactive substance-related disorder, such as excess consumption of amphetamine-like substances, or withdrawal from benzodiazepines.

Treatment

Once GAD develops, it is possible for it to become chronic, but can be managed or eliminated with proper treatment.

Both cognitive behavioral therapy (CBT) and medications (such as SSRIs) have been shown to be effective in reducing anxiety. A comparison of overall outcomes of CBT and medication on anxiety did not show statistically significant differences (i.e. they were equally effective in treating anxiety).¹ However, CBT is significantly more effective in reducing depression severity, and its effects are more likely to be maintained in the long term, whereas the effectiveness of pharmacologic treatment tends to lessen if medication is discontinued. A combination of both CBT and medication is generally seen as the most desirable approach to treatment. Use of medication to lower extreme anxiety levels can be important in enabling patients to engage effectively in CBT.

Lifestyle

Lifestyle factors including: stress management, stress reduction, relaxation, exercise, sleep hygiene, caffeine, and alcohol can influence the persistence of anxiety. Stress is a factor that can trigger anxiety. Therefore, keeping stress levels low through stress management, stress reduction, and relaxation may be beneficial. Physical activity has shown to have a positive impact whereas low physical activity may be a risk factor for anxiety disorders.

Therapy

Generalized anxiety disorder is based on psychological components that include cognitive avoidance, positive worry beliefs, ineffective problem-solving and emotional processing, interpersonal issues, previous trauma, intolerance of uncertainty, negative problem orientation, ineffective coping, emotional hyper arousal, poor understanding of emotions, negative cognitive reactions to emotions, maladaptive emotion management and regulation, experiential avoidance, and behavioral restriction. To combat the previous cognitive and emotional aspects of GAD, psychologists often include some of the following key treatment components in their intervention plan; self-monitoring, relaxation techniques, self-control desensitization, gradual stimulus control, cognitive restructuring, worry outcome monitoring, present-moment focus, expectancy-free living, problem-solving techniques, processing of core fears, socialization, discussion and reframing of worry beliefs, emotional skills training, experiential exposure, psycho education, mindfulness and acceptance exercises. There exist behavioral, cognitive, and a combination of both treatments for GAD that focus on some of those key components.

Among the cognitive-behavioral orientated psychotherapies the two main treatments are cognitive behavioral therapy and acceptance and commitment therapy (ACT). Intolerance of uncertainty therapy and motivational interviewing are two new treatments for GAD that are used as either stand-alone treatments or additional strategies that may enhance CBT.

Cognitive behavioral therapy

Cognitive behavioral therapy (CBT) appears to be useful in the treatment of generalized anxiety disorder.^[45] However, there is still room for improvement because only about 50% of those who complete treatments achieve higher functioning or recovery after treatment. Therefore, there's a need for enhancement of current components of CBT. CBT usually helps one-third of the patients substantially, whilst another third does not respond at all to treatment.

CBT is a psychological method of treatment that involves a therapist working with the person to understand how thoughts and feelings influence behaviour. Elements of the therapy include exposure strategies to allow the patient to confront their anxieties gradually and feel more comfortable in anxiety-provoking situations, as well as to practice the skills they have learned. CBT can be used alone or in conjunction with medication.

Albert Ellis is one such notable cognitive theorist, and practitioner who coined the term "maladaptive assumptions. These maladaptive assumptions, negatively incorporated in a client's thought patterns, may serve to disrupt the ability to engage in healthy interactions. Frequent use of such maladaptive assumption such as, "It is awful and catastrophic when things are not the way one would very much like them to be" may provoke further anxiety over the course of events. Thus rational-emotive therapy, a form of cognitive behavioral therapy, may be implemented to counter clients' maladaptive assumptions, and educate them about the part excessive worrying plays in resulting cognitive interpretations across a span of social situations.

Components of CBT for GAD includes psycho education, self-monitoring, stimulus control techniques, relaxation, self-control desensitization, cognitive restructuring, worry exposure, worry behavior modification, and problem-solving. The first step in the treatment of GAD is informing of the patient about the issues and the plan of the solution. The purpose of psychoeducation is to provide some relief, destigmatization of the disorder, motivating, and accomplishing participation by making the patient understand the program of treatment. The purpose of this component is to identify cues that provoke the anxiety. Stimulus control intervention refers to minimizing the stimulus conditions under which worrying occurs. Relaxation techniques lower the patients' stress and thus increase attention to alternatives in feared situations (other than worrying). Deep breathing exercise, progressive muscle relaxation, and applied relaxation fall under the scope of relaxation techniques.

Self-control desensitization involves patients being deeply relaxed before vividly imagining themselves in situations that usually make them anxious and worry until internal anxiety cues are triggered. Patients then imagine themselves coping with the situation and decreasing their anxious response. If anxiety diminishes, they then enter a deeper relaxed state and turn off the scene. The purpose of cognitive restructuring is to shift from a worrisome outlook to a more functional and adaptive perception of the world, the future, and the self. It involves Socratic questioning that leads patients to think through their worries and anxieties so they can realize that alternative interpretations and feelings are more accurate. It also involves behavioral experiments that actually test the validity of both the negative and alternative thoughts in real-life situations. In CBT for GAD, patients also engage in worry exposure exercises during which they

are asked to imagine themselves exposed to images of the most feared outcomes. Then they engage in response-prevention instruction that prevents them from avoiding the image and motivates alternative outcomes to the feared stimulus. The goals of worry exposure are habituation and reinterpretation of the meaning of the feared stimulus. Worry behavior prevention requires patients to monitor the behaviors that caused them worry and are then asked to prevent themselves from engaging in them. Instead, they are encouraged to use other coping mechanisms learned earlier in the treatment. Finally, problem solving focuses on dealing with current problems through a problem-solving approach: (1) definition of the problem, (2) formulation of goals, (3) creation of alternative solutions, (4) decision-making, and (5) implementing and verifying the solutions.

Acceptance and commitment therapy

Acceptance and commitment therapy (ACT) is a behavioral treatment based on acceptance-based models. ACT is designed with the purpose to target three therapeutic goals: (1) reduce the use of avoiding strategies intended to avoid feelings, thoughts, memories, and sensations; (2) decreasing a person's literal response to their thoughts (e.g., understanding that thinking "I'm hopeless" does not mean that the person's life is truly hopeless), and (3) increasing the person's ability to keep commitments to changing their behaviors. These goals are attained by switching the person's attempt to control events to working towards changing their behavior and focusing on valued directions and goals in their lives as well as committing to behaviors that help the individual accomplish those personal goals. This psychological therapy teaches mindfulness (paying attention on purpose, in the present, and in a nonjudgmental manner) and acceptance (openness and willingness to sustain contact) skills for responding to uncontrollable events and therefore manifesting behaviors that enact personal values. Like many other psychological therapies, ACT works best in combination with pharmacology treatments.

Intolerance of uncertainty therapy

Intolerance of uncertainty therapy (IUT) refers to a consistent negative reaction to uncertain and ambiguous events regardless of their likelihood of occurrence. IUT is used as a stand-alone treatment for GAD patients. Thus, IUT focuses on helping patients in developing the ability to tolerate, cope with and accept uncertainty in their life in order to reduce anxiety. IUT is based on the psychological components of psycho education, awareness of worry, problem-solving training, re-evaluation of the usefulness of worry, imagining virtual exposure, recognition of uncertainty, and behavioral exposure. Studies have shown support for the efficacy of this therapy with GAD patients with continued improvements in follow-up periods.

Motivational interviewing

A promising innovative approach to improving recovery rates for the treatment of GAD is to combine CBT with motivational interviewing (MI). Motivational interviewing is a strategy centered on the patient that aims to increase intrinsic motivation and decrease ambivalence about change due to the treatment. MI contains four key elements: (1) express empathy, (2) heighten dissonance between behaviors that are not desired and values that are not consistent with those behaviors, (3) move with resistance rather than direct confrontation, and (4) encourage self-efficacy. It is based on asking open-ended questions and listening carefully and reflectively to patients' answers, eliciting "change talk", and talking with patients about the pros and cons of change. Some studies have shown the combination of CBT with MI to be more effective than CBT alone.

Comorbidity

Depression

In the National Comorbidity Survey (2005), 58 percent of patients diagnosed with major depression were found to have an anxiety disorder; among these patients, the rate of comorbidity with GAD was 17.2 percent, and with panic disorder, 9.9 percent. Patients with a diagnosed anxiety disorder also had high rates of comorbid depression, including 22.4 percent of patients with social phobia, 9.4 percent with agoraphobia, and 2.3 percent with panic disorder. A longitudinal cohort study found 12% of the 972 participants had GAD comorbid with MDD. Accumulating evidence indicates that patients with comorbid depression and anxiety tend to have greater illness severity and a lower treatment response than those with either disorder alone. In addition, social function and quality of life are more greatly impaired.

For many, the symptoms of both depression and anxiety are not severe enough (i.e. are subsyndromal) to justify a primary diagnosis of either major depressive disorder (MDD) or an anxiety disorder. However, dysthymia is the most prevalent comorbid diagnosis of GAD clients. Patients can also be categorized as having mixed anxiety-depressive disorder, and they are at significantly increased risk of developing full-blown depression or anxiety.

Various explanations for the high comorbidity between GAD and depressive disorders have been suggested, including genetic pleiotropy, meaning that GAD and nonbipolar depression might represent different phenotypic expressions of a common etiology.

Substance use disorders

Those with GAD have a lifetime comorbidity prevalence of 30% to 35% with alcohol use disorder and 25% to 30% for another substance use disorder. People with both GAD and a substance use disorder also have a higher lifetime prevalence for other comorbidities. A study found that GAD was the primary disorder in slightly more than half of the 18 participants that were co morbid with alcohol use disorder.

Other comorbidities

GAD often coexists with conditions associated with stress, such as muscle tension and irritable bowel syndrome

Patients with GAD can sometimes present with symptoms such as insomnia or headaches as well as pain and interpersonal problems.

Further research suggests that about 20 to 40 percent of individuals with attention deficit hyperactivity disorder have co morbid anxiety disorders, with GAD being the most prevalent.

Comorbidity and treatment

Therapy has been shown to have equal efficacy in patients with GAD and patients with GAD and comorbid disorders. Patients with comorbid disorders have more severe symptoms when starting therapy but demonstrated a greater improvement than patients with simple GAD.

Pharmacological approaches i.e. the use of antidepressants must be adapted for different comorbidities. For example, serotonin reuptake inhibitors and short acting benzodiazepines (BZDs) are used for depression and anxiety. However, for patients with anxiety and substance abuse, BZDs should be avoided due to their abuse liability. CBT has been found an effective treatment since it improves symptoms of GAD and substance abuse.

Compared to the general population, patients with internalizing disorders such as depression, generalized anxiety disorder (GAD) and post-traumatic stress disorder (PTSD) have higher mortality rates, but die of the same age-related diseases as the population, such as heart disease, cerebrovascular disease and cancer.

DSM-5 Category: Obsessive-Compulsive and Related Disorders

Introduction

Obsessive-Compulsive Disorder (OCD) is a condition in which an individual experiences intrusive thoughts, images, or impulses which create a high degree of emotional distress. Although these emotions primarily involve anxious arousal; guilt and disgust may also be experienced. For example, a woman with OCD, may experience an obsession which involves the thought or image of killing her child by stabbing him or her. This intrusive thought causes her to feel anxious, disgusted with herself, as well as guilt-ridden. This emotional distress is triggered by not only the intrusive thought, but primarily because this thought is ego-dystonic (i.e., not a true representation of her true personality). As a result of this emotional distress, the person feels a need to perform some type of ritual (either overt or covert in nature). The ritual serves two functions: (1) to reduce the intensity of the anxiety, disgust, etc. and (2) to prevent or lessen the likelihood of acting on the thought/image. This is referred to as “thought-action fusion” (TAF).

The majority of individuals with OCD experience both obsessions and compulsions. Although individuals with OCD are aware that their rituals are senseless (unless they lack insight), they have great difficulty not engaging in their ritualistic behaviors, for the reasons mentioned above.

Symptoms of Obsessive-Compulsive Disorder under DSM-5

Under the DSM-5, Obsessive-Compulsive Disorder (OCD) is characterized by obsessions and/or compulsions. Those individuals who do not report engaging in compulsions (rituals) are often referred to as “Pure O’s”, or “Pure Obsessionals”.

As was discussed earlier, a person who evidences OCD experiences obsessions and/or compulsions (rituals) which result in emotional distress. Examples of obsessions may include themes related to cleanliness, aggression, harm, symmetry, etc. Examples of compulsions include cleaning, counting or arranging.

Obsessions are defined as:

- Recurrent and persistent thoughts, impulses, or images that are intrusive and cause marked anxiety or distress; but are not excessive worries about real-life problems;
- The person attempts to ignore, suppress or neutralize these thoughts, impulses, or images;

The person is aware that the obsessional thoughts, impulses, or images are a product of his or her own mind, as opposed to delusional in nature. **Obsessions** are defined as:

Compulsions are defined as:

- Repetitive behaviors or mental acts that the person feels driven to perform in response to an obsession;
- The behaviors or mental acts are directed at preventing or reducing distress or a dreaded event or situation;
- These behaviors or mental acts may not always be associated with the content of the obsession theme. For example, if the theme is Contamination, the ritual may involve mental rehearsal or counting;
- The symptoms of OCD are not the result of another psychiatric disorder present or caused by a medical condition or substance abuse.

Obsessive-Compulsive Disorder Treatment and Therapy

Various treatments have been effective in reducing the symptoms of OCD. Evidenced-based treatments such as Cognitive-Behavior Therapy (CBT) techniques are typically the first-line course of treatment, which primarily consist of Exposure and Response (Ritual) Prevention methods. Psycho education plus relaxation training (PRT) may be used to treat severe functional impairment in children. Modifying family accommodation strategies has also been used with PRT (Piacentini et al., 2011).

Various forms of behavior therapy methods have helped to successfully reduce obsessive-compulsive symptomology. In one study, group cognitive-behavioral family-based therapy (CBFT) for childhood obsessive-compulsive disorder reduced OCD symptoms and depression, whereas individual CBT did not affect specific mood states, such as depression (O'Leary, Barrett, & Fjermestad, 2009).

Given the intrusive nature of obsessive-compulsive behavior on not only the individual but also family members, caregivers, teachers and others, therapy is often beneficial for these individuals as well. Family members may feel frustrated, angry and confused when certain OCD symptoms interfere with social-interpersonal relationships and daily functioning. Parent management training (PMT) together with CBT produced a much higher reduction in symptoms than CBT alone. Specifically, PMT helps lessen the parent-child conflict that can interfere with treatment outcomes (Sukhodolsky et al., 2013).

Anti-depressant medications, specifically several SSRI's, have been used to treat OCD, along with the concurrent use of Cognitive-Behavior Therapy. One study administered cognitive behavioral therapy (exposure and ritual prevention) while another applied OCD-specific CBT (Franklin et al., 2011). In both studies, CBT together with SSRIs showed superior efficacy than SSRI's alone (Simpson et al., 2013). In treatment-resistant OCD, deep brain stimulation has shown to improve global functioning, quality of life and depression, however improvement regarding symptoms of anxiety and OCD were not evident (Huff et al., 2010).

Living With Obsessive-Compulsive Disorder

Obsessive-compulsive behaviors can affect the quality of home, work and school life. They are often time consuming and impact daily functioning. For example, the repetitive act of cleaning in response to contamination obsessional themes can deplete both time and energy levels for other activities. Severe OCD may involve spending up to 7 hours each day engaging in various forms of ritualistic behaviors. An individual with OCD is often considered strange or eccentric and as a

result may be subject to social stigma. Or they may hide their obsessions and compulsions by conducting them in private, thus limiting their social activities.

The self-awareness of the disorder, key criteria under DSM-V, can act as a deterrent to receiving treatment. The individual may hide the behavior and perform their rituals in secret. There may be socially unacceptable aspects concerning the nature of the person's obsessions such as harm or sexually deviant behavior, making it increasingly difficult for the individual to disclose his or her symptoms to their doctor, or a family member, due to shame and embarrassment. The interference with daily functioning, shame and distress can all contribute to the depression that individuals with OCD often experience.

Obsessions and compulsions can frequently interfere with the lives of all family members who live with someone who evidences Obsessive-Compulsive Disorder. The attitude and reaction of family members toward an individual with OCD can have a significant impact (positive or negative) with respect to the course, severity and treatment effectiveness. Family-focused cognitive behavioral therapy (FCBT) has been shown to be quite successful in family environments that display cohesiveness, and are low in family conflict (Peris et al., 2012).

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