Part III. Mental Disorders – Block 2

Module 7:
Anxiety Disorders

Module 7: Anxiety Disorders

Module Overview

In Module 7, we will discuss matters related to anxiety disorders to include their clinical presentation, epidemiology, comorbidity, etiology, and treatment options. Our discussion will include generalized anxiety disorder, specific phobia, agoraphobia, social anxiety disorder, and panic disorder. Be sure you refer Modules 1-3 for explanations of key terms (Module 1), an overview of the various models to explain psychopathology (Module 2), and descriptions of the various therapies (Module 3).

Module Outline

- 7.1. Clinical Presentation
- 7.2. Epidemiology
- 7.3. Comorbidity
- 7.4. Etiology
- 7.5. Treatment

Module Learning Outcomes

- Describe how anxiety disorders present.
- Describe the epidemiology of anxiety disorders.
- Describe comorbidity in relation to anxiety disorders.
- Describe the etiology of anxiety disorders.
- Describe treatment options for anxiety disorders.

7.1. Clinical Presentation

Section Learning Objectives

- Describe how generalized anxiety disorder presents.
- Describe how specific phobia presents.
- Describe how agoraphobia presents.
- Describe how social anxiety disorder presents.
- Describe how panic disorder presents.

The hallmark symptoms of anxiety-related disorders are excessive fear and anxiety and related behavioral disturbances. How do we distinguish fear from anxiety? The DSM says that fear is an emotional response to a real or perceived imminent threat which leads to "…surges of autonomic arousal necessary for flight or flight, thoughts of immediate danger, and escape behaviors." Anxiety, on the other hand, is the anticipation of a future threat leading to, "…muscle tension and vigilance in preparation for future danger and cautious or avoidant behaviors" (APA, 2022, pg. 215). The anxiety disorders differ from one another in the types of objects or situations that lead to fear, anxiety, or avoidance behavior. We will cover generalized anxiety disorder, specific phobia, agoraphobia, social anxiety disorder, and panic disorder.

7.1.1. Generalized Anxiety Disorder

Generalized anxiety disorder is characterized by an underlying excessive anxiety and worry related to a wide range of events or activities and lasting for more days than not for at least six months. While many individuals experience some degree of worry throughout the day,

individuals with generalized anxiety disorder experience worry of greater intensity and for longer periods than the average person (APA, 2022). Additionally, they are often unable to control their worry through various coping strategies, which directly interferes with their ability to engage in daily social and occupational tasks. To receive a diagnosis of generalized anxiety disorder, three or more of the following somatic symptoms must be present in adults as well: restlessness, fatigue, difficultly concentrating, irritability, muscle tension, and problems sleeping (APA, 2022; Gelenberg, 2000).

7.1.2. Specific Phobia

Specific phobia is distinguished by fear or anxiety specific to an object or a situation. While the amount of fear or anxiety related to the specific object or situation varies among individuals, it also varies related to the proximity of the object or situation. When individuals are face-to-face with their specific phobia, immediate fear is present, and the phobic object or situation is actively avoided or endured. It should also be noted that these fears are excessive and irrational, often severely impacting one's daily functioning. The fear, anxiety, or avoidance is persistent, lasting at least six months (APA, 2022).

Individuals can experience multiple specific phobias at the same time. In fact, nearly 75% of individuals with a specific phobia report fear of more than one object and the average individual fears three or more objects or situations (APA, 2022). When making a diagnosis of specific phobia, it is important to identify the stimulus. Among the most diagnosed specific phobias are animals, natural environment (height, storms, water), blood-injection-injury (needles, invasive medical procedures), or situational (airplanes, elevators, enclosed places). In terms of gender differences, women predominantly experience animal, natural environment, and

situational specific phobias while blood-injection-injury phobia is experienced by both men and women equally (APA, 2022).

7.1.3. Agoraphobia

Agoraphobia is defined as intense fear or anxiety triggered by two or more of the following: using public transportation such as planes, trains, ships, buses; being in large, open spaces such as parking lots or on bridges; being in enclosed spaces like stores or movie theaters; being in a crowd or standing in line; or being outside of the home alone. The individual fears or avoids these situations because they believe something terrible may occur and due to concern over not being able to escape or help not being available (APA, 2022). Active avoidance of the situations occurs and can be behavioral such as changing daily routines or using delivery to avoid entering a restaurant or cognitive such as using distraction to bear with an agoraphobic situation. The avoidance can result in the person being homebound. The fear or anxiety is out of proportion to the actual danger they pose and has been present for at least six months.

7.1.4. Social Anxiety Disorder

For **social anxiety disorder**, the anxiety or fear relates to social situations, particularly those in which an individual can be evaluated by others. More specifically, the individual is worried that they will be judged negatively and viewed as stupid, anxious, crazy, boring, or unlikeable, to name a few. Some individuals report feeling concerned that their anxiety symptoms will be obvious to others via blushing, stuttering, sweating, trembling, etc. These fears severely limit an individual's behavior in social settings and have occurred for six months or more.

To explain social anxiety in greater detail, let's review the story of Mary. Mary reported the onset of her social anxiety disorder in early elementary school when teachers would call on students to read parts of their textbook aloud. Mary stated that she was fearful of making mistakes while reading and to alleviate this anxiety, she would read several sections ahead of the class to prepare for her turn to read aloud. Despite her preparedness, one day in 5th grade, Mary was called to read, and she stumbled on a few words. While none of her classmates realized her mistake, Mary was extremely embarrassed and reported higher levels of anxiety during future *read aloud* moments in school. In fact, when she was called upon, Mary stated she would completely freeze up and not talk at all. After a few moments of not speaking, her teacher would skip Mary and ask another student to read her section. It took several years and a very supportive teacher for Mary to begin reading aloud in class again.

Like Mary, individuals with social anxiety disorder report that all or nearly all social situations provoke this intense fear. Some individuals even report significant anticipatory fear days or weeks before a social event is to occur. This anticipatory fear often leads to avoidance of social events in some individuals; others will attend social events with a marked fear of possible threats. Because of these fears, there is a significant impact on one's social and occupational functioning.

It is important to note that the cognitive interpretation of these social events is often excessive and out of proportion to the actual risk of being negatively evaluated. As we saw in Mary's case, when she stumbled upon her words while reading to the class, none of her peers even noticed her mistake. Situations in which individuals experience anxiety toward a real threat, such as bullying or ostracizing, would not be diagnosed with social anxiety disorder as the negative evaluation and threat are real.

7.1.5. Panic Disorder

Panic disorder consists of a series of recurrent, unexpected panic attacks coupled with the fear of future panic attacks. A panic attack is defined as a sudden or abrupt surge of fear or impending doom along with at least four physical or cognitive symptoms. Physical symptoms include heart palpitations, sweating, trembling or shaking, shortness of breath, feeling as though they are being choked, chest pain, nausea, dizziness, chills or heat sensations, and numbness/tingling. Cognitive symptoms may consist of feelings of derealization (feelings of unreality) or depersonalization (feelings of being detached from oneself), the fear of losing control or 'going crazy,' or the fear of dying (APA, 2022). While symptoms generally peak within a few minutes, it seems much longer for the individual experiencing the panic attack.

There are two key components to panic disorder—the attacks are *unexpected*, meaning there is nothing that triggers them, and they are *recurrent*, meaning they occur multiple times. Because these panic attacks occur frequently and are primarily "out of the blue," they cause significant worry or anxiety in the individual as they are unsure of when the next attack will happen. In contrast to unexpected there are also expected panic attacks, or those that have an obvious trigger. The DSM-5-TR states that presence of expected panic attacks does not rule out the diagnosis of panic disorder as about half of individuals diagnosed with the disorder in the United States and Europe have both types of attacks (APA, 2022).

In some individuals, significant behavioral changes such as fear of leaving their home or attending large events occur as the individual is fearful an attack will happen in one of these situations, causing embarrassment. Additionally, individuals report worry that others will think they are "going crazy" or losing control if they were to observe an individual experiencing a

panic attack. Occasionally, an additional diagnosis of agoraphobia is given to an individual with panic disorder *if* their behaviors meet diagnostic criteria for this disorder as well.

The frequency and intensity of these panic attacks vary widely among individuals. Some people report panic attacks occurring once a week for months on end, others report more frequent attacks multiple times a day, but then experience weeks or months without any attacks. The intensity of symptoms also varies among individuals, with some patients experiencing four or more symptoms (full-symptom) or less than four (limited-symptom. Furthermore, individuals report variability within their panic attack symptoms, with some panic attacks presenting with more symptoms than others. To be diagnosed with panic disorder, the individual must present with more than one unexpected full-symptom panic attack (APA, 2022).

You should have learned the following in this section:

- All anxiety disorders share the hallmark symptoms of excessive fear or worry related to behavioral disturbances.
- Generalized anxiety disorder is characterized by an underlying excessive worry related to a wide range of events or activities and an inability to control their worry through coping strategies.
- Specific phobia is characterized by fear or anxiety specific to an object or a situation and individuals can experience fear of more than one object.
- Agoraphobia is characterized by intense fear related to situations in which the individual is in public situations where escape may be difficult and help may not be able to come.
- Social anxiety disorder is characterized by fear or anxiety related to social situations, especially when evaluation by others is possible.
- Panic disorder is characterized by a series of recurrent, unexpected panic attacks coupled with the fear of future panic attacks.

Section 7.1 Review Questions

1. What is the difference between fear and anxiety?
2. What are the key differences between generalized anxiety disorder and agoraphobia?
3. Individuals with social anxiety disorder will experience both physical and cognitive symptoms, particularly when presented with social interactions. What are these symptoms?
4. What are the common types of specific phobias?
5. What are the physical and cognitive symptoms observed during panic disorder?
6. What are the key components of panic disorder?

7.2. Epidemiology

Section Learning Objectives

- Describe the epidemiology of generalized anxiety disorder.
- Describe the epidemiology of specific phobia.
- Describe the epidemiology of agoraphobia.
- Describe the epidemiology of social anxiety disorder.
- Describe the epidemiology of panic disorder.

7.2.1. Generalized Anxiety Disorder

The 12-month prevalence for generalized anxiety disorder is estimated to be 2.9% of the adult general population of the United States while the mean 12-month prevalence around the world is 1.3% (with a range of 0.2% to 4.3%). The disorder occurs more frequently in women and adolescent girls, those of European descent, and those living in high-income countries (APA, 2022).

7.2.2. Specific Phobia

The prevalence rate for specific phobia is 8-12% in the United States and about 6% in European countries. There is a 2:1 ratio of females to males diagnosed with specific phobia. Prevalence rates are lower in older individuals and those from Asia, Africa, and Latin America.

7.2.3. Agoraphobia

The prevalence rate of agoraphobia worldwide for adolescents and adults is 1% to 1.7%. As with other anxiety disorders, women are twice as likely to be diagnosed with it. Older adults in the United States (aged 65 and up) have a 12-month prevalence of 0.4% and for older adults aged 55 and up in Europe and North America, the prevalence is 0.5%.

7.2.4. Social Anxiety Disorder

The overall prevalence rate of social anxiety disorder is significantly higher in the United States than in other countries, with an estimated 7% of the U.S. population diagnosed with social anxiety disorder, compared to 0.5% to 2.0% worldwide (median prevalence in Europe is 2.3%). A decrease in the diagnosis of social anxiety disorder among older individuals, aged 65 years and older, has been found. Regarding gender, there is a higher diagnosis rate in females than males. This gender discrepancy is greater among adolescents and young adults. Finally, non-Hispanic whites in the United States have a higher prevalence rate than Asian, Latinx, African American, and Caribbean Black descent (APA, 2022).

7.2.5. Panic Disorder

The 12-month prevalence for panic disorder in the general population is estimated at around 2-3% in adults and adolescents across the United States and several European countries. Higher rates of panic disorder are found in American Indians and non-Latinx whites. Females are more commonly diagnosed than males with a 2:1 diagnosis rate. Prevalence declines from about 1.2% in adults older than 55 to 0.7% in adults aged 64 and up.

You should have learned the following in this section:

- Prevalence rates for anxiety disorders range from 1.0% for agoraphobia up to 12% for specific phobia.
- For most anxiety disorders, females are twice as likely to be diagnosed.

Section 7.2 Review Questions

1. Create a table of the prevalence rates across the various anxiety related disorders. What are the differences between the disorders?
2. How do prevalence rates vary as a function of gender, race, nationality, and age?

7.3. Comorbidity

Section Learning Objectives

- Describe the comorbidity of generalized anxiety disorder.
- Describe the comorbidity of specific phobia.
- Describe the comorbidity of agoraphobia.
- Describe the comorbidity of social anxiety disorder.
- Describe the comorbidity of panic disorder.

7.3.1. Generalized anxiety disorder

There is a high comorbidity between generalized anxiety disorder and the other anxiety-related disorders, as well as unipolar depressive disorders. Comorbidity with substance use, neurodevelopmental, neurocognitive, psychotic, and conduct disorders is less common for those afflicted with generalized anxiety disorder. Generalized anxiety disorder is associated with

higher levels of suicidal ideation and behavior and psychological autopsy studies reveal it is the most frequent anxiety disorder diagnosed in suicides (APA, 2022).

7.3.2. Specific phobia

Other anxiety disorders, depressive and bipolar disorders, substance-related disorders, and somatic symptom disorder are typically comorbid with specific phobia. Additionally, personality disorders, in particular dependent personality disorder, are comorbid. Specific phobia is associated with the transition from suicidal ideation to attempt (APA, 2022).

7.3.3. Agoraphobia

As with other anxiety disorders, common comorbid mental disorders include other anxiety disorders and depressive disorders. Agoraphobia is also comorbid with PTSD and alcohol use disorder. For those with comorbid major depressive disorder, the agoraphobia is more treatment-resistant compared to those with agoraphobia alone. About 15% of patients diagnosed with agoraphobia report suicidal thoughts or behavior (APA, 2022).

7.3.4. Social Anxiety Disorder

Among the most common comorbid diagnoses with a social anxiety disorder are other anxiety-related disorders, major depressive disorder, and substance-related disorders. The high comorbidity rate among anxiety-related disorders and substance-related disorders is likely connected to the efforts of self-medicating to deal with social fears. For example, an individual with social anxiety disorder may consume more alcohol in social settings in efforts to alleviate the anxiety of the social situation. The comorbidity with major depressive disorder may be due to

the chronic social isolation associated with social anxiety disorder. Comorbidity has also been found with body dysmorphic disorder and avoidant personality disorder.

7.3.5. Panic disorder

Panic disorder rarely occurs in isolation, as 80% of individuals report symptoms of other anxiety disorders, major depressive disorder, bipolar I and bipolar II disorder, and possibly mild alcohol use disorder. Some individuals diagnosed with panic disorder also develop a substance-related disorder, likely as an attempt to treat their anxiety with alcohol or other substances. About 25% of patients report suicidal thoughts and the disorder may increase the risk for future suicidal behaviors but not deaths. (APA, 2022).

Unlike some of the other anxiety disorders, there is a high comorbidity with general medical symptoms. More specifically, individuals with panic disorder are more likely to report somatic symptoms such as dizziness, cardiac arrhythmias, COPD, asthma, irritable bowel syndrome, and hyperthyroidism (APA, 2022). The relationship between panic symptoms and these conditions is unclear.

You should have learned the following in this section:

- Many anxiety disorders are comorbid with one another.
- Other common comorbid disorders include depressive disorders and substance-related disorders.
- Agoraphobia has a high comorbidity with PTSD and panic disorder with general medical symptoms.
- Most anxiety disorders are associated with suicidal thoughts and behaviors, but not always deaths.

Section 7.3 Review Questions

1. What other disorders commonly occur with specific anxiety related disorders and why?
2. What anxiety-related disorder has a high comorbidity with medical symptoms?
3. What is the relationship of the disorders with suicidal ideation and attempts/behaviors? Be specific.

7.4. Etiology

Section Learning Objectives

- Describe the biological causes of anxiety disorders.
- Describe the psychological causes of anxiety disorders.
- Describe the sociocultural causes of anxiety disorders.

7.4.1. Biological

7.4.1.1. Biological - Genetic influences. While genetics have been known to contribute to the presentation of anxiety symptoms, the interaction between genetics and stressful environmental influences appears to account for more anxiety disorders than genetics alone (Bienvenu, Davydow, & Kendler, 2011). The quest to identify specific genes that may predispose individuals to develop anxiety disorders has led researchers to the serotonin transporter gene (5-HTTLPR). Mutation of the 5-HTTLPR gene is related to a reduction in serotonin activity and an increase in anxiety-related personality traits (Munafo, Brown, & Hairiri, 2008).

7.4.1.2. Biological - Neurobiological structures. Researchers have identified several brain structures and pathways that are likely responsible for anxiety responses. Among those structures is the **amygdala,** the area of the brain that is responsible for storing memories related to emotional events (Gorman, Kent, Sullivan, & Coplan, 2000). When presented with a fearful situation, the amygdala initiates a reaction to ready the body for a response. First, the amygdala triggers the hypothalamic-pituitary-adrenal (HPA) axis to prepare for immediate action— either to fight or flight. The second pathway is activated by the feared stimulus itself, by sending a

sensory signal to the **hippocampus** and **prefrontal cortex**, to determine if the threat is real or imagined. If it is determined that no threat is present, the amygdala sends a calming response to the HPA axis, thus reducing the level of fear. If a threat is present, the amygdala is activated, producing a fear response.

Specific to *panic disorder* is the implication of the **locus coeruleus**, the brain structure that serves as an "on-off" switch for norepinephrine neurotransmitters. It is believed that increased activation of the locus coeruleus results in panic-like symptoms; therefore, individuals with panic disorder may have a hyperactive locus coeruleus, leaving them more susceptible to experience more intense and frequent physiological arousal than the general public (Gorman, Kent, Sullivan, & Coplan, 2000). This theory is supported by studies in which individuals experienced increased panic symptoms following the injection of norepinephrine (Bourin, Malinge, & Guitton, 1995).

Unfortunately, norepinephrine and the locus coeruleus fail to fully explain the development of panic disorder, as treatment would be much easier if *only* norepinephrine was implicated. Therefore, researchers argue that a more complex neuropathway is likely responsible for the development of panic disorder. More specifically, the **corticostriatal-thalamocortical (CSTC) circuit**, also known as the fear-specific circuit, is theorized as a major contributor to panic symptoms (Gutman, Gorman, & Hirsch, 2004). When an individual is presented with a frightening object or situation, the amygdala is activated, sending a fear response to the anterior cingulate cortex and the orbitofrontal cortex. Additional projection from the amygdala to the hypothalamus activates endocrinologic responses to fear, releasing adrenaline and cortisol to help prepare the body to fight or flight (Gutman, Gorman, & Hirsch, 2004). This complex

pathway supports the theory that panic disorder is mediated by several neuroanatomical structures and their associated neurotransmitters.

7.4.2. Psychological

7.4.2.1. Psychological - Cognitive. The cognitive perspective on the development of anxiety related disorders centers around dysfunctional thought patterns. As seen in depression, **maladaptive assumptions** are routinely observed in individuals with anxiety-related disorders, as they often engage in interpreting events as dangerous or overreacting to potentially stressful events, which contributes to an overall heightened anxiety level. These **negative appraisals**, in combination with a biological predisposition to anxiety, likely contribute to the development of anxiety symptoms (Gallagher et al., 2013).

Sensitivity to physiological arousal not only contributes to anxiety disorders in general, but also for panic disorder where individuals experience various physiological sensations and misinterpret them as catastrophic. One explanation for this theory is that individuals with panic disorder are more susceptible to more frequent and intensive physiological symptoms than the general public (Nillni, Rohan, & Zvolensky, 2012). Others argue that these individuals have had more trauma-related experiences in the past, and therefore, are quick to misevaluate their symptoms as a potential threat. This misevaluation of symptoms as impending disaster likely maintain symptoms as the cognitive misinterpretations to physiological arousal creates a negative feedback loop, leading to more physiological changes.

Social anxiety is also primarily explained by cognitive theorists. Individuals with social anxiety disorder tend to hold unattainable or extremely high social beliefs and expectations. Furthermore, they often engage in preconceived maladaptive assumptions that they will behave

incompetently in social situations and that their behaviors will lead to terrible consequences. Because of these beliefs, they anticipate social disasters will occur and, therefore, avoid social encounters (or limit them to close friends/family members) in efforts to prevent the disaster (Moscovitch et al., 2013). Unfortunately, these cognitive appraisals are not only isolated to before and during the event. Individuals with social anxiety disorder will also evaluate the social event after it has taken place, often obsessively reviewing the details. This overestimation of social performance negatively reinforces future avoidance of social situations.

7.4.2.2. Psychological – Behavioral. The behavioral explanation for the development of anxiety disorders is mainly reserved for phobias—both specific and social phobia. More precisely, behavioral theorists focus on **respondent conditioning** - when two events that occur close together become strongly associated with one another, despite their lack of causal relationship (see Module 2 for an explanation of respondent conditioning). Watson and Rayner's (1920) infamous Little Albert experiment is an example of how respondent conditioning can be used to induce fear through associations. In this study, Little Albert developed a fear of white rats by pairing a white rat with a loud sound. This experiment, although lacking ethical standards, was groundbreaking in the development of learned behaviors. Over time, researchers have been able to replicate these findings (in more ethically sound ways) to provide further evidence of the role of respondent conditioning in the development of phobias.

7.4.2.3. Psychological – Modeling is another behavioral explanation of the development of specific and social phobias. In modeling, an individual acquires a fear though observation and imitation (Bandura & Rosenthal, 1966). For example, when a young child observes their parent display irrational fear of an animal, the child may then begin to display similar behavior. Similarly, seeing another individual being ridiculed in a social setting may increase the chances

of developing social anxiety, as the individual may become fearful that they would experience a similar situation in the future. It is speculated that the maintenance of these phobias is due to the *avoidance* of the feared item or social setting, thus preventing the individual from learning that the object or situation is not something that should be feared.

While modeling and respondent conditioning largely explain the development of phobias, there is some speculation that the accumulation of many these learned fears will develop into generalized anxiety disorder. Through **stimulus generalization,** or the tendency for the conditioned stimulus to evoke similar responses to other stimuli, a fear of one stimulus (such as the dog) may become generalized to other items (such as all animals). As these fears begin to grow, a more generalized anxiety will present, as opposed to a specific phobia.

7.4.3. Sociocultural

Seeing how prominent the biological and psychological constructs are in explaining the development of anxiety-related disorders, we also need to review the social constructs that contribute and maintain anxiety disorders. While characteristics such as living in poverty, experiencing significant daily stressors, and increased exposure to traumatic events are all identified as significant contributors to anxiety disorders, additional sociocultural influences such as gender and discrimination have also received considerable attention, mainly due to the epidemiological nature of the disorder.

Gender has largely been researched within anxiety disorders due to the consistent discrepancy in the diagnosis rate between men and women. As previously discussed, women are routinely diagnosed with anxiety disorders more often than men, a trend that is observed throughout the entire lifespan. One potential explanation for this discrepancy is the influence of

social pressures on women. Women are more susceptible to experience traumatic experiences throughout their life, which may contribute to anxious appraisals of future events. Furthermore, women are more likely to use **emotion-focused coping**, which is less effective in reducing distress than **problem-focused coping** (McLean & Anderson, 2009). These factors may increase levels of stress hormones within women that leave them susceptible to develop symptoms of anxiety. Therefore, it appears a combination of genetic, environmental, and social factors may explain why women tend to be diagnosed more often with anxiety-related disorders.

Exposure to discrimination and prejudice, particularly relevant to ethnic minorities and other marginalized groups, can also impact an individual's anxiety level. Discrimination and prejudice contribute to negative interactions, which is directly related to negative affect and an overall decline in mental health (Gibbons et al., 2014). The repeated exposure to discrimination and prejudice over time can lead to fear responses in individuals, along with subsequent avoidance of social situations in efforts to protect themselves emotionally.

You should have learned the following in this section:

- Biological causes of anxiety disorders include the serotonin transporter gene (5-HTTLPR); brain structures to include the amygdala, hippocampus, and prefrontal cortex; and the locus coeruleus and corticostriatal-thalamocortical (CSTC) circuit in relation to panic disorder.
- Psychological causes of anxiety disorders include maladaptive assumptions, the linking of events through respondent conditioning, modeling, and stimulus generalization as it relates to generalized anxiety disorder.
- Sociocultural causes of anxiety disorders include social pressures leading to a higher rate of diagnosis for women and discrimination and prejudice which affects ethnic minorities and other marginalized groups.

Section 7.4 Review Questions

1. Discuss the biological etiology of panic disorders. What brain structures and neurotransmitters are involved?
2. How does the cognitive model explain the development and maintenance of anxiety related disorders?
3. What is the difference between emotion-focused and problem-focused coping strategies? How do these two coping strategies explain differences in anxiety related disorders?
4. What are the effects of prejudice and discrimination on the development of anxiety disorders?

7.5. Treatment

Section Learning Objectives

- Describe treatment options for generalized anxiety disorder.
- Describe treatment options for specific phobia.
- Describe treatment options for agoraphobia.
- Describe treatment options for social anxiety disorder.
- Describe treatment options for panic disorder.

7.5.1. Generalized Anxiety Disorder

7.5.1.1. Psychopharmacology. Benzodiazepines, a class of sedative-hypnotic drugs that will be discussed in more detail in the substance abuse module, originally replaced barbiturates as the leading anti-anxiety medication due to their less addictive nature, yet equally effective ability to calm individuals at low dosages. Unfortunately, as more research was done on benzodiazepines, serious side effects, as well as physical dependence of benzodiazepines at large dosages, has routinely been documented (NIMH, 2013). Due to these negative effects, selective serotonin-reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs) are generally considered to be first-line medication options for those with generalized anxiety disorder. Findings indicate a 30-50% positive response rate to these psychopharmacological interventions (Reinhold & Rickels, 2015). Unfortunately, none of these medications continue to provide any benefit once they are stopped; therefore, other effective treatment options such as CBT, relaxation training, and biofeedback are often encouraged before the use of pharmacological interventions.

7.5.1.2. Rational-Emotive therapy. Albert Ellis developed rational emotive therapy in the mid-1950s as one of the first forms of cognitive-behavioral therapy. Ellis proposed that individuals were not aware of the effect their negative thoughts had on their behaviors and various relationships, and thus, established a treatment to address these thoughts and provide relief to those suffering from anxiety and depression. The goal of rational emotive therapy is to identify irrational, self-defeating assumptions, challenge the rationality of those assumptions, and to replace them with new, more productive thoughts and feelings. By identifying and replacing these assumptions, the individual will experience relief of generalized anxiety disorder symptoms (Ellis, 2014).

7.5.1.3. Cognitive Behavioral Therapy (CBT). CBT is discussed in detail in the Mood Disorder Module; however, it is also among the most effective treatment options for a variety of anxiety disorders, including generalized anxiety disorder. Findings suggest 60 percent of individuals report a significant reduction/elimination in anxious thoughts one-year post treatment (Hanrahan, Field, Jones, & Davy, 2013). The fundamental goal of CBT is a combination of cognitive and behavioral strategies aimed to identify and restructure maladaptive thoughts while also providing opportunities to utilize these more effective thought patterns through exposure-based experiences. Through repetition, the individual will be able to identify and replace anxious thoughts outside of therapy sessions, ultimately reducing their overall anxiety levels (Borkovec, & Ruscio, 2001).

7.5.1.4. Biofeedback. Biofeedback provides a visual representation of a patient's physiological arousal. To achieve this feedback, a patient is connected to a computer that provides continuous information on their physiological states. There are several ways a patient can connect to the computer. Among the most common is electromyography (EMG). **EMG**

measures the amount of muscle activity currently experienced by the individual. An electrode is placed on a patient's skin just above a major muscle group, usually the forearm or the forehead. Other common areas of measurement are **electroencephalography** (EEG), which measures the neurofeedback or brain activity; **heart rate variability** (HRV), which measures autonomic activity such as heart rate or blood pressure; and **galvanic skin response** (GSR) which measures sweat.

Once the patient is connected to the biofeedback machine, the clinician can walk the patient through a series of relaxation scripts or techniques as the computer simultaneously measures the changes in muscle tension. The theory behind biofeedback is that in providing a patient with a visual representation of changes in their physiological state, they become more skilled at voluntarily reducing their physiological arousal, and thus, their overall sense of anxiety or stress. While research has identified only a modest effect of biofeedback on anxiety levels, patients do report a positive experience with the treatment due to the visual feedback of their physiological arousal (Brambrink, 2004).

7.5.2. Specific Phobias

7.5.2.1. Exposure treatments. While there are many treatment options for specific phobias, research routinely supports the behavioral techniques as the most effective treatment strategies. Seeing as the behavioral theory suggests phobias develop via respondent conditioning, the treatment approach revolves around breaking the maladaptive association between the object and fear. This is generally accomplished through **exposure treatments**. As the name implies, the individual is *exposed* to their feared stimuli. This can be done in several different approaches: *systematic desensitization, flooding, and modeling.*

Systematic desensitization is an exposure technique that utilizes relaxation strategies to help calm the individual as they are presented with the fearful object. The notion behind this technique is that both fear and relaxation cannot exist at the same time; therefore, the individual learns how to replace their fearful reaction with a calm, relaxing reaction.

To begin, the patient, with assistance from the clinician, will identify a *fear hierarchy*, or a list of feared objects/situations ordered from least fearful to most fearful. After teaching several different types of relaxation techniques, the clinician will present items from the fear hierarchy, starting from the least fearful object/subject, while the patient practices using the learned relaxation techniques. The presentation of the feared object/situation can be in person—**in vivo exposure**—or it can be imagined—**imaginal exposure.** Imaginal exposure tends to be less intensive than in vivo exposure; however, it is less effective than in vivo exposure in eliminating the phobia. Depending on the phobia, in vivo exposure may not be an option, such as with a fear of a tornado. Once the patient can effectively employ relaxation techniques to reduce their anxiety to a manageable level, the clinician will slowly move up the fear hierarchy until the individual does not experience excessive fear of all objects on the list.

Flooding is another exposure technique in which the clinician does not utilize a fear hierarchy, but rather repeatedly exposes the individual to their most feared object or situation. Similar to systematic desensitization, flooding can be done in either in vivo or imaginal exposure. Clearly, this technique is more intensive than systematic or gradual exposure to feared objects. Because of this, patients are at a greater likelihood of dropping out of treatment, thus not successfully overcoming their phobias.

Modeling is another common technique used to treat phobias (Kelly, Barker, Field, Wilson, & Reynolds, 2010). In this technique, the clinician approaches the feared object/subject

while the patient observes. As the name implies, the clinician models appropriate behaviors when exposed to the feared stimulus, showing that the phobia is irrational. After modeling several times, the clinician encourages the patient to confront the feared stimulus with the clinician, and then ultimately, without the clinician.

7.5.3. Agoraphobia

Similar to the treatment approaches for specific phobias, exposure-based techniques are among the most effective treatment options for individuals with agoraphobia. However, unlike the high success rate in specific phobias, exposure treatment for agoraphobia has been less effective in providing complete relief from the disorder. The success rate may be impacted by the high comorbidity rate of agoraphobia and panic disorder. Because of the additional presentation of panic symptoms, exposure treatments alone are not the most effective in eliminating symptoms as residual panic symptoms often remain (Craske & Barlow, 2014). Therefore, the best treatment approach for those with agoraphobia and panic disorder is a combination of exposure and CBT techniques (see panic disorder treatment).

For individuals with agoraphobia *without* panic symptoms, the use of group therapy in combination with individual exposure therapy has been identified as a successful treatment option. The group therapy format allows the individual to engage in exposure-based field trips to various community locations, while also maintaining a sense of support and security from a group of individuals whom they know. Research indicates that this type of treatment provides improvement for nearly 60 to 80 percent of patients with agoraphobia; however, there is a relatively high rate of partial relapse, suggesting that long-term treatment or booster sessions should continue for several years at minimum (Craske & Barlow, 2014).

7.5.4. Social Anxiety Disorder

7.5.4.1. Exposure. A hallmark treatment approach for all anxiety disorders is exposure. Specific to social anxiety disorder, the individual is encouraged to engage in social situations where they are likely to experience increased anxiety. Initially, the clinician will role-play various social situations with the patient so they can practice social interactions in a safe, controlled environment (Rodebaugh, Holaway, & Heimberg, 2004). As the patient becomes habituated to the interaction with the clinician, the clinician and patient may venture outside of the treatment room and engage in social situations with random strangers at various locations such as fast-food restaurants, local stores, libraries, etc. The patient is encouraged to continue with these exposures outside of treatment to help reduce anxiety related to social situations.

7.5.4.2. Social skills training. This treatment is specific to social anxiety disorder as it focuses on the patient's skill deficits or inadequate social interactions that contribute to their negative social experiences and anxiety. During a session, the clinician may use a combination of skills such as modeling, corrective feedback, and positive reinforcement to provide feedback and encouragement to the patient regarding their behavioral interactions (Rodebaugh, Holaway, & Heimberg, 2004). By incorporating the clinician's feedback into their social repertoire, the patient can engage in positive social behaviors outside of the treatment room and improve their overall social interactions while reducing ongoing social anxiety.

7.5.4.3. Cognitive restructuring. While exposure and social skills training are suitable treatment options, research routinely supports the need to incorporate cognitive restructuring as an additive component in treatment to provide substantial symptom reduction. Like cognitive restructuring previously discussed in the Mood Disorder module, the clinician will work with the therapist to identify negative, automatic thoughts that contribute to the distress in social

situations. The clinician can then help the patient establish new, positive thoughts to replace these negative thoughts. Research indicates that implementing cognitive restructuring techniques before, during, and after exposure sessions enhances the overall effects of treatment of social anxiety disorder (Heimberg & Becker, 2002).

7.5.5. Panic Disorder

7.5.5.1. Cognitive Behavioral Therapy (CBT). CBT is the most effective treatment option for individuals with panic disorder as the focus is on correcting misinterpretations of bodily sensations (Craske & Barlow, 2014). Nearly 80 percent of people with panic disorder report complete remission of symptoms after mastering the following five components of CBT for panic disorder (Craske & Barlow, 2014).

Psychoeducation. Treatment begins by educating the patient on the nature of panic disorder, the underlying causes of panic disorder, as well as the mechanisms that maintain the disorder such as the physical, cognitive, and behavioral response systems (Craske & Barlow, 2014). This part of treatment is fundamental in correcting any myths or misconceptions about panic symptoms, as they often contribute to the exacerbation of panic symptoms.

Self-monitoring. **Self-monitoring**, or the act of self-observation, is essential to the CBT treatment process for panic disorder. In this part of treatment, the individual is taught to identify the physiological cues immediately leading up to and during a panic attack. Then, the patient is encouraged to recognize and document the thoughts and behaviors associated with these physiological symptoms. By bringing awareness to the symptoms, as well as the relationship between physical arousal and cognitive-behavioral responses, the patient learns the fundamental processes with which they can manage their panic symptoms (Craske & Barlow, 2014).

Relaxation training. Similar to that in exposure-based treatment for phobias, prior to engaging in exposure training, the individual must learn relaxation techniques to apply during onset of panic attacks. Though breathing training was once included as the relaxation training technique of choice for panic disorder more recent research has failed to support this technique as effective in the use of panic disorder due to the high incidence of hyperventilation during panic attacks (Schmidt et al., 2000). Findings suggest that breathing retraining is more commonly misused as a safety behavior or means for avoiding physical symptoms as opposed to an effective physiological response to stress (Craske & Barlow, 2014).

Progressive muscle relaxation. To replace the breathing retraining, Craske & Barlow (2014) suggest **progressive muscle relaxation** (PMR). In PMR, the patient learns to tense and relax various large muscle groups throughout the body. The patient is encouraged to start at either the head or the feet, and gradually work their way through the entire body, holding the tension for roughly 10 seconds before relaxing. The theory behind PMR is that in tensing the muscles for a prolonged period, the individual exhausts those muscles, forcing them (and eventually) the entire body to engage in relaxation (McCallie, Blum, & Hood, 2006).

Cognitive restructuring. Cognitive restructuring, or the ability to recognize cognitive errors and replace them with alternate, more appropriate thoughts, is likely the most powerful part of CBT treatment for panic disorder, aside from the exposure part. As noted previously, cognitive restructuring involves identifying the role of thoughts in generating and maintaining emotions. The clinician encourages the patient to view these thoughts as "hypotheses" as opposed to fact, which allows the beliefs to be questioned and challenged. This is where the detailed recordings produced by self-monitoring are helpful. By discussing what the patient has recorded for the relationship between physiological arousal and thoughts/behaviors, the clinician

can help the patient restructure the maladaptive thought processes to more positive thought processes, which in return, helps to reduce fear and anxiety.

Exposure. As discussed in detail in the specific phobia section, the patient is next encouraged to engage in a variety of exposure techniques such as in vivo exposure and *interoceptive exposure*, while also incorporating the cognitive restructuring and relaxation techniques previously learned to reduce and eliminate ongoing distress. **Interoceptive exposure** involves inducing panic-specific symptoms to the individual repeatedly for a prolonged period, so that maladaptive thoughts about the sensations can be disconfirmed and conditional anxiety responses are extinguished (Craske & Barlow, 2014). Some examples of these exposure techniques include spinning a patient repeatedly in a chair to induce dizziness and breathing in a paper bag to cause hyperventilation. These treatment approaches can be presented gradually; however, the patient must endure the physiological sensations for at least 30 seconds to 1 minute to ensure adequate time for applying cognitive strategies to misappraisal of cognitive symptoms (Craske & Barlow, 2014).

Interoceptive exposure is continued both in and outside of treatment until panic symptoms remit. Over time, the habituation of fear within an exposure session ultimately leads to habituation across treatment and long-term remission of panic symptoms (Foa & McNally, 1996). Occasionally, panic symptoms will return in individuals who report complete remission of panic disorder. Follow-up booster sessions reviewing the steps above are generally effective in eliminating symptoms again.

7.5.5.2. Pharmacological interventions. According to Craske & Barlow (2014), nearly half of patients with panic disorder present to psychotherapy already on medication, likely prescribed by their primary care physician. Some researchers argue that anti-anxiety medications

impede the progress of CBT treatment as the individual is not able to fully experience the physiological sensations during exposure sessions, thus limiting their ability to modify maladaptive thoughts and maintaining the panic symptoms. Results from large clinical trials suggest *no advantage* during or immediately after treatment of combining CBT and medication (Craske & Barlow, 2014). Additionally, when the medication was discontinued post-treatment, the CBT+ medication groups fared worse than the CBT treatment-only groups, thus supporting the theory that immersion in interoceptive exposure is limited due to the use of medication. Therefore, it is suggested that medications be reserved for those who do not respond to CBT therapy alone (Kampman, Keijers, Hoogduin & Hendriks, 2002).

You should have learned the following in this section:

- Treatment options for generalized anxiety disorder include benzodiazepines, rational-emotive therapy, CBT, and biofeedback.
- Treatment options for specific phobias include exposure treatments such as systematic desensitization, flooding, and modeling.
- Treatment options for agoraphobia include exposure and CBT techniques.
- Treatment options for social anxiety disorder include exposure treatment, social skills training, and cognitive restructuring.
- Treatment options for panic disorder include CBT, psychoeducation, self-monitoring, relaxation training, cognitive restructuring, exposure, and pharmacological interventions.

Section 7.5 Review Questions

1. Discuss the types of exposure treatments for individuals with anxiety disorders? Which are most effective? What have been some concerns with exposure treatment?
2. What is biofeedback? How is biofeedback used to treat anxiety related disorders?
3. What are the concerns with using pharmacological interventions in the treatment of anxiety disorders? Is there a time when it is helpful to use this treatment method?

Module Recap

Module 7, the first module of Unit 3, covered the topic of anxiety disorders. This discussion included generalized anxiety disorder, specific phobias, agoraphobia, social anxiety disorder, and panic disorder. As with other modules in this book, we discussed the clinical presentation, epidemiology, comorbidity, and etiology of the anxiety disorders. Treatment options included biological, psychological, and sociocultural options. In Module 8, we will discuss somatic symptom and related disorders.