
UNIT 8: ANXIETY DISORDERS *

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8.1 LEARNING OBJECTIVES

After studying this Unit, you would be able to:

- *Explain the clinical picture, causal factors, and treatment of Phobia, Social anxiety disorder, Panic disorder, and Generalized anxiety disorder.*

8.2 INTRODUCTION

We often become anxious in our day to day life situations, such as, when we have to appear for an exam/job interview, or caught in a traffic jam while already running late, trying to meet the deadlines etc. Our level of anxiety decreases once we come out of such situations, However, it is important to look at certain situations when the individual remains anxious irrespective of the situation and is unable to cope with it. When this happens, the person is said to be suffering from anxiety disorder/s. There are several anxiety disorders that have been identified by DSM-5, like generalized anxiety disorder, specific phobia, social phobia, panic disorder, and agoraphobia. But before we delve further into these disorders, let us first understand about anxiety and other similar conditions such as fear and panic.

Distinction between Anxiety, Fear, and Panic

The most common way to distinguish fear and anxiety has been in the terms of an actual external stimulus that is perceived as a real danger/threat by most people. **Fear** is experienced in the presence of real danger/threat whereas **anxiety** is experienced only in anticipation of danger/threat when such a danger/threat is not present or cannot be specified. Several

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researchers have distinguished between fear, panic, and anxiety in terms of cognitive/subjective, physiological, and behavioral components (e.g., Barlow, 2002; Bouton, 2005; & Grillon, 2008). These components are loosely associated, i.e., every individual may not necessarily experience all the three components. Thus, someone having fear or anxiety may experience cognitive and physiological component with greater intensity than the behavioral component and vice versa (Carson, Butcher, Mineka, & Holley, 2013).

Cognitive/Subjective: “I am afraid

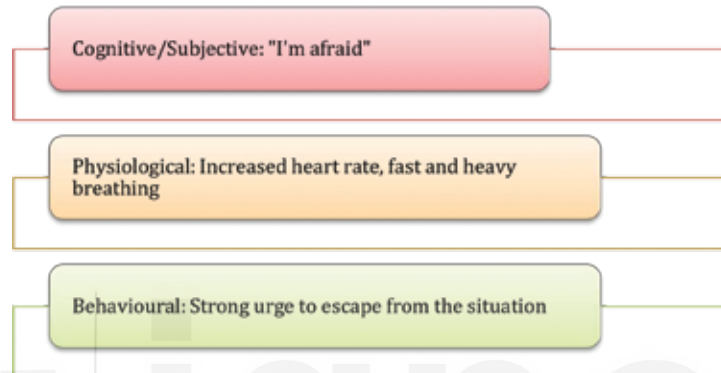


Fig. 2.1 Components of Fear

Panic, like fear has all the above three components. However, additionally, panic attack is characterised by subjective feelings of impending doom, fear of dying, going crazy and losing control. Anxiety on the other hand is a more diffused, future-oriented state that comprises of a complex blend of cognitions and emotions.

It needs to be noted here that all of us experience fear, anxiety and feelings of panic some time or the other. However, these become causes of concern when these are intense, persistent, interfere in our daily functioning, negatively affect our adjustment in different aspects of our life, and impact our health and well-being. In these cases, it becomes a mental health condition and disorder to be treated by mental health professionals. Socio cultural context needs to be taken into account by the healthcare workers while treating as it plays a significant role in influencing the manifestation, progression and intervention in case of anxiety disorders. However, more research needs to be done in exploring the effectiveness of context-specific techniques and interventions for dealing with anxiety disorder as studies (Trivedi & Gupta, 2010) indicate, there is lack of research in India with regard to epidemiology, phenomenology, course, outcome, and management of anxiety disorder.

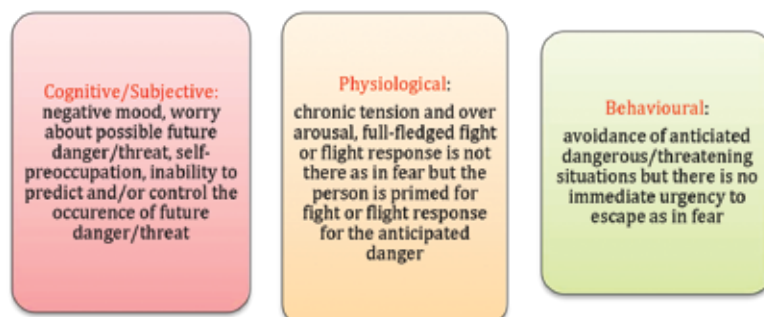


Fig. 2.2 Components of Anxiety

8.3 PHOBIA: CLINICAL FEATURES, CAUSES AND TREATMENT CLINICAL FEATURES

“A phobia is a persistent and disproportionate fear of a specific object or situation that presents little or no actual danger to a person” (Carson, Butcher, & Mineka, 2003). DSM-5 has identified three categories of phobias: **specific phobia, social phobia and agoraphobia.**

Now, we will discuss the above mentioned phobias, separately.

(1) Specific Phobias

Specific phobia is diagnosed when a person shows strong and persistent fear which is triggered by a specific object or situation. On encountering a phobic stimulus, the person with specific phobia show an immediate fear response that resembles a panic attack except for the presence of a clear external trigger (APA, 2013). They experience anxiety on anticipation of the phobic stimulus and go to great lengths to avoid it. The person is fearful and avoids even the mere representations (picture/model) of the phobic stimulus. Most often, the person has an insight about one’s condition, that is, the person recognizes that the response to a phobic stimulus is unreasonable or excessive.

Box 8.1: Criteria for Specific Phobia according to DSM-5 (APA, 2013)

- A. Marked and persistent fear that is excessive or unreasonable, cued by the presence or anticipation of a specific object or situation (e.g., flying, heights, animals, receiving an injection, seeing blood).
- B. Exposure to the phobic stimulus almost invariably provokes an immediate anxiety response, which may take the form of a situationally bound or situationally predisposed Panic Attack.
Note: In children, the anxiety may be expressed by crying, tantrums, freezing, or clinging.
- C. The person recognizes that the fear is excessive or unreasonable.
Note: In children, this feature may be absent.
- D. The phobic situation(s) is avoided or else is endured with intense anxiety or distress.
- E. The avoidance, anxious anticipation, or distress in the feared situation(s) interferes significantly with the person’s normal routine, occupational (or academic) functioning, or social activities or relationships, or there is marked distress about having the phobia.
- F. In individuals under age 18 years, the duration is at least 6 months.
- G. The anxiety, panic attacks, or phobic avoidance associated with the specific object or situation are not better accounted for by another mental disorder, such as Obsessive-Compulsive Disorder (e.g., fear of dirt in someone with an obsession about contamination), Post-Traumatic Stress Disorder (e.g., avoidance of stimuli associated with a severe stressor), Separation Anxiety Disorder (e.g., avoidance of school), Social Phobia (e.g., avoidance of social situations because of fear of embarrassment), Panic Disorder with Agoraphobia, or Agoraphobia without history of Panic Disorder.

DSM- 5 defines *five types of specific phobias*:

- **Animal:** These include fears of animals such as dogs, cats, spiders, bugs, mice, rats, birds, fish, and snakes.
 - **Natural Environment:** These include fears of heights, storms, and being near water.
 - **Blood-Injection-Injury:** These include fears of seeing blood, receiving a blood test or injection, watching medical procedures on television, and for some individuals, even just talking about medical procedures.
 - **Situational:** These include fears of situations such as driving, flying, elevators, tunnels, and enclosed places.
 - **Others :** These include other specific fears, including fears of choking or vomiting after eating certain foods, fears of balloons breaking or other loud sounds, or fears of clowns, or ‘space phobia’ where the person has a fear of falling down if he/she is away from walls or support).
- (2) **Social Phobia** is a fear of social situations. A person is afraid of acting in a humiliating or embarrassing way when he/she is exposed to the scrutiny of others. Social phobia may be specific to a situation such as fear of public speaking or generalised as in fear of many different social interactions.
- (3) **Agoraphobia** was traditionally thought to be a fear of “*agora*”, Greek word for public places of assembly (Marks, 1987). Thus it is a fear of being in a public place or crowded places such as shopping malls, theaters etc. where there can be large gatherings. It mainly involves a fear of having a panic attack in situations where escape might prove to be difficult or embarrassing.

Comorbidity: People who suffer from specific phobia are likely to suffer from other anxiety disorders also (Crum and Pratt, 2001).

Prevalence, age of onset, and gender differences: Lifetime prevalence for specific phobias is 12 percent which implies that these phobias are quite common (Kessler, Chirru et al., 2005c). In India, however, prevalence rate has been reported to be 4.2 percent which is significantly lower as compared to other countries (Reddy & Chandrashekar, 1998). Despite being very common, people with specific phobias are less likely to seek treatment than people with other anxiety disorders. The most common specific phobias are fears of spiders, snakes, and heights. Phobias also depend on culture, e.g., in China, “Paleng” is a fear of cold, in which the person fears that loss of body heat may be life threatening.

The age of onset for specific phobias varies depending on the fear. Animal phobias, storm phobias, blood-injection-injury phobias and dental phobias typically begin in early childhood. The average age of onset for height phobias is in the teens, whereas specific phobias of enclosed places (claustrophobia) and driving phobia often begin in adolescence and early adulthood (Barlow, 2002a).

Some specific phobias (e.g., spiders, storms) are much more common among women than men, whereas others (e.g., blood phobias) are equally

found in men and women. Lifetime prevalence is about 7 percent for men and 16 percent for women (Kessler et al., 1994).

General characteristics of people with phobias

- People with phobias usually know that their fears are somewhat irrational, but they cannot help themselves;
- If they attempt to approach the phobic situation, they are overcome with fear or anxiety, which may vary from mild feelings of apprehension and distress to a full-fledged activation of the fight or flight response very similar to panic attack;
- Phobic behavior tends to be reinforced by the reduction in anxiety that occurs each time a feared situation is avoided; and
- Phobias may sometimes be maintained by secondary gains, such as, increased attention, sympathy, and some control over the behavior of others. These benefits are usually not in awareness of the sufferer.

Causes of Phobia

The causes of specific phobias are complex, involving biological factors, a history of negative experiences in the feared situation as well as other psychological factors, and evolutionary factors.

(1) Biological Perspective

Genetic Factors: The speed and strength of conditioning of fear is determined by genetic and temperamental variables (Hettema, et al., 2003; Oehlberg & Mineka, 2011). This means that phobias are acquired as a result of genetic makeup or temperament and personality. People who are carriers of one of the two variants on the serotonin-transporter gene which is linked to high neuroticism are more likely to be conditioned to fear stimuli (Lonsdorf et al., 2009). Related to these findings, Kagan et al. (2001) reported that behaviorally inhibited (shy, timid) toddlers showed a higher risk for the development of multiple specific phobias at 7-8 years of age than were uninhibited toddlers. Studies have also indicated a modest genetic contribution, for example, Fyer et al. (1995) reported an elevated risk of specific phobias in first-degree relatives of those who had been diagnosed with specific phobia. Twin studies on females and males found a higher concordance rate for animal phobias in MZ than DZ twins (Kendler et al., 1999; Hettema et al., 2005). The same studies have also reported the effect of the non shared environment on the origin of specific phobias which implies the role of other factors, such as psychological and socio-cultural in the acquisition of specific phobias.

(2) Psychological Perspective

Psychoanalytic Viewpoint: According to Freud, phobias represent a defense against anxiety that stems from repressed impulses of the id. As it is too dangerous to know the repressed id impulse, the anxiety is displaced (defense mechanism: displacement) onto an external object or situation that has some symbolic relationship to the feared object. Freud (1909) explained the development of phobia with the case study of little Hans, a five-year old boy with a phobia of horses. Freud suggested that Hans's phobia was developed as a result of anxiety due to Oedipus complex. Hans unconsciously hated

his father and wanted to kill him and possess his mother. This led to a fear in Hans that his father would kill or castrate him for having such negative feelings. Since these unconscious conflicting thoughts were not acceptable to the conscious mind, the anxiety created was displaced onto horses as these symbolically represented his father. This explanation was criticized as being far too speculative by many researchers and an alternative explanation of Hans' phobia in terms of the learning theory was provided by behavioral theorists.

Behavioral Perspective: In the development of phobias, the behavioral theorists focus on;

- **Learned Behavior:** Wolpe and Rachman in 1960 suggested that Hans' horse phobia originated from an instance of traumatic classical conditioning. He had witnessed an accident in which a horse was badly hurt. It upset him so much that he started to avoid leaving the house so as not to encounter the horses in the street. Several research studies by other theorists also supported the role of classical conditioning principals in acquisition of phobias. An individual learns to fear a previously neutral stimulus which is paired with a noxious object or event. Once a phobia is acquired it gets generalized to similar objects or events. In a survey conducted by Ost and Hugdahl (1981), fifty eight percent of the respondents attributed their phobia to a traumatic conditioning situation. Further, direct conditioning may be especially common in the onset of dental phobia (Kent, 1997), claustrophobia (Rachman, 1997), and accident phobia (Kuch, 1997).
- **Vicarious or Observational Learning:** Phobias can be acquired by merely observing another person who acts fearfully to a given object or situation (Ost & Hugdahl, 1981). For example, lab reared rhesus monkeys who were not initially afraid of snakes rapidly developed phobia of snakes after observing their wild reared counterparts behaving fearfully with snakes (Mineka & Cook, 1993). Similar observations were reported when lab reared monkeys watched the videotape of wild reared monkeys behaving fearfully with snakes. This implies that phobias can be developed through mass media also (Mineka & Sutton, 2006). This involves informational learning where an individual learns to fear a particular object or situation by hearing or reading that the situation is dangerous, for example, learning to fear flying by hearing about plane crashes in the news, or learning to fear driving by continually receiving warnings from others that driving is dangerous.

Cognitive Perspective: Cognitive factors, such as attention, memory, cognitive biases help to maintain the phobias that have been acquired. Generally, people with specific phobias tend to **pay more attention to threatening information** that relates to their fear (Mineka, 1992). For example, individuals with spider phobias are often the first people to spot a spider if there is one in the room. People with phobias also tend to have **distortions in their memories** for encounters with the objects and situations they fear. For example, people with an animal phobia may remember the animal that they have encountered as larger, faster, or more frightening than it was. Further, people with specific phobias

tend to *hold beliefs and to interpret situations* in such a way as to maintain or increase their anxiety (Ohman & Mineka, 1999). For example, people with a fear of height may assume that they are more likely to fall. People who fear enclosed places, such as elevators, may believe that they will run out of air, or that they will be unable to escape. Lastly, *avoidance of feared situations* prevents people with specific phobias from learning that the situations they fear are not as “dangerous” as they feel. In addition, relying on “*safety behaviors*” (e.g., driving extra slowly to avoid an accident, always wearing shoes to prevent insects from touching one’s feet) can also help to maintain a person’s fears.

(3) Evolutionary Perspective

Our evolutionary history has affected which stimuli are likely to be feared, e.g., snakes, water, heights, enclosed spaces are more likely to be objects of fear than bicycles, knives, cars, even though the latter objects may be at least as likely to be associated with trauma. Primates and humans have a biological preparedness to rapidly associate certain kinds of objects- such as snakes, spiders, water and enclosed spaces with aversive events. It has been suggested that this preparedness may have been a selective advantage (e.g., helped in survival) for our ancestors in the course of evolution (Mineka & Ohman, 2002). Ohman (1996) has provided two lines of evidence to support the preparedness theory of phobias. First, in case of human participants, fear was conditioned more effectively to fear relevant stimuli such as snakes and spiders than to fear irrelevant stimuli such as flowers and vegetables. In case of primates, lab reared monkeys with no prior experience to fear relevant stimuli also showed conditioning for fearing relevant than irrelevant stimuli.

Treatment of Phobia

The main treatment options for phobia are as follows:

(1) Exposure Therapy

The client is exposed to the feared object, animal, or place in a controlled environment (Choy et al., 2007). There are various forms of the exposure therapy, for example, systematic desensitization, flooding, virtual reality. *Systematic desensitization* is based on the premise that one cannot be anxious and relaxed at the same time. It is conducted in several steps. Firstly, with the help of client, a hierarchy of the fear eliciting situation is formed, beginning from the least fear producing to the most fear producing situation, e.g., dog barking in the next lane to the dog barking just in front of the client. Secondly, the client is taught relaxation exercises, such as progressive muscle relaxation, deep breathing. Then the person is asked to relax and imagine the fear producing situation in the ascending order of the hierarchy, beginning from the least fear producing situation. Gradually, the client learns to relax in the most fear producing situation, thereby extinguishing phobia. An opposite of this technique is *Flooding*, where the client is exposed to the most fear producing situation and is taught that he/she can go through the fear producing situation without being harmed contrary to his/her expectation of getting hurt. Earlier therapists used the

real situations or imagination (if the situation was hazardous), whereas now therapists use *virtual reality*. In this type of therapy, the therapists with the help of computers and other equipment simulate the fear producing situation, e.g., heights, air travel and the client is exposed to the simulation exercise. Through all these techniques, the client realizes the irrationality of his/her fear and thus the fear gets extinct.

(2) Modeling

Based on Bandura's (1977) vicarious learning theory, the client either observes another person (sometimes the therapist) in real life or in a movie, acting fearlessly in a situation that causes phobia in the client. By watching another person acting fearlessly and calmly, the client also learns that the phobic situation or the stimulus is harmless, which helps to treat phobia.

While the behavior therapies have been found to be effective in treating phobia, medication and cognitive techniques, such as cognitive restructuring, have not been found to be effective. According to the recent findings, a drug, called d-cycloserine, when used in conjunction with exposure therapies like virtual reality, has been found to increase the effectiveness of exposure therapies (Norberg et al., 2008).

Self Assessment Questions 1

1. Fear is experienced in _____ danger whereas anxiety is experienced in _____ danger.
2. Name the three categories of phobia.
3. In _____ technique, the client is exposed to the most fear producing situation.
4. In _____ therapy, the therapist simulates the fear producing situation with the help of computers and other equipment.
5. Phobias represent a defense against anxiety that stems from repressed impulses of the id. This is the _____ perspective of phobia.

8.4 SOCIAL ANXIETY DISORDER: CLINICAL FEATURES, CAUSES AND TREATMENT

Clinical Features

Social anxiety disorder (SAD) is also called as Social phobia which is a persistent, irrational fear generally linked to the presence of other people and can be extremely debilitating. However, the difference between social phobia and social anxiety disorder is largely chronological, in that social phobia is the former term and SAD is the current term for the disorder. The official psychiatric diagnosis of social phobia was introduced in the third edition of the Diagnostic and Statistical Manual (DSM-III). Social phobia was described as a fear of performance situations and did not include fears of less formal situations such as casual conversations.

DSM-5 describes social anxiety disorder as “disabling fears of one or more specific social situations (such as public speaking, urinating in a public bathroom, or eating or writing in public) where the person fears of being exposed to the scrutiny and potential negative evaluation of others or that

one may act in an embarrassing or humiliating manner”. Therefore, the person tries to avoid such social situations or when avoidance is not possible endures them with great distress. There are two subtypes of SAD according to DSM-5, one is specific to performance situations, e.g., public speaking, and the other is general or in non-performance situations, e.g., eating in public.

Selective mutism can be considered as one variant of social anxiety disorder. Mostly seen in children, selective mutism involves the inability of the child to speak in specific situations whereas s/he is able to speak normally in other situations. For example, while the child speaks well at home, she fails to verbalize at school because of experiencing higher levels of social anxiety. They fail to communicate in selective situations/contexts despite the ability to speak in other situations.

Box 8.2: Criteria for Social Anxiety Disorder according to DSM-5 (APA, 2013)

- A. A marked or persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing.
Note: In children, there must be evidence of the capacity for age-appropriate social relationships with familiar people and the anxiety must occur in peer settings, not just in interactions with adults.
- B. Exposure to the feared social situation almost invariably provokes anxiety, which may take the form of a situationally bound or situationally predisposed Panic Attack.
Note: In children, the anxiety may be expressed by crying, tantrums, freezing, or shrinking from social situations with unfamiliar people.
- C. The person recognizes that the fear is excessive or unreasonable.
Note: In children, this feature may be absent.
- D. The feared social or performance situations are avoided or else are endured with intense anxiety or distress.
- E. The avoidance, anxious anticipation, or distress in the feared social or performance situation(s) interferes significantly with the person’s normal routine, occupational (academic) functioning, or social activities or relationships, or there is marked distress about having the phobia.
- F. In individuals under age 18 years, the duration is at least 6 months.
- G. The fear or avoidance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition and is not better accounted for by another mental disorder (e.g., Panic Disorder With or Without Agoraphobia, Separation Anxiety Disorder, Body Dysmorphic Disorder, a Pervasive Developmental Disorder, or Schizoid Personality Disorder).

H. If a general medical condition or another mental disorder is present, the fear in Criterion A is unrelated to it, e.g., the fear is not of Stuttering, trembling in Parkinson's disease, or exhibiting abnormal eating behaviour in Anorexia Nervosa or Bulimia Nervosa.

Comorbidity: People who suffer from SAD are also likely to suffer from one or more anxiety disorders and depressive disorder (Ruscio et al., 2008). Generalized SAD has been found to be comorbid with depression and alcohol abuse (Wittchen, Stein, & Kessler, 1999). Specific SAD is comorbid with GAD, specific phobias, panic disorder, avoidant personality disorder, mood disorders and alcohol abuse (Crum & Pratt, 2001).

Prevalence, age of onset, gender differences and cultural factors: SAD is common and found even in public celebrities, for example, Barbara Streisand (American actor and singer). Its lifetime prevalence is 12 percent of a given population (Ruscio et al., 2008). In India, prevalence rate of 12.8 percent has been found in the adolescents (Mehatalia & Vankar, 2004). It is a persistent disorder with spontaneous recovery shown by only 37 percent of the sufferers over 12 years (Bruce et al., 2005).

SAD usually begins during early or middle adolescence or early adulthood (Ruscio et al., 2008). SAD is more common among women than men as 60 percent of the women have been reported to suffer from the disorder. SAD is also affected by cultural factors. Example, in Japan, fear of giving offense to others is very important, whereas in USA, fear of being negatively evaluated by others is a source of social anxiety.

General characteristics of people with SAD

- The individual usually tries to avoid situations in which she /he might be evaluated and reveal signs of anxiousness or behave in an embarrassing way;
- Fears concerning excessive sweating or blushing are common;
- Speaking, performing in public, eating in public, using public lavatories, etc. can elicit extreme anxiety; and
- They often work in occupations or professions far below their talent or intelligence because their extreme social sensitivity does not allow them to work in situations which involve interactions with people.

Social anxiety disorder is different from Separate anxiety disorder

Separation anxiety disorder is mostly seen in children and to some extent in adolescents and even in adults. It involves a fear of separation from the caregiver or major attachment figures. The child experiences distress when not around the caregiver and is concerned that they would be alone if something happens to their caregiver. Instances of refusal to go outside the home or to the school alone is normal in very small children, but they usually outgrow it and develop independence. However, those who develop clinical levels of fear and anxiety related to separation from their caregiver can have separation anxiety disorder, They may also experience nightmares related to separation and exhibit symptoms of headache or stomach pain.

Causes of Social Anxiety Disorder

Let us understand the casual factors for social anxiety disorder.

(1) Biological Perspective

Genetic and Temperamental Factors: Results from a very large study of female twins suggests a variance of 30 percent due to genetic component in development of SAD (Smoller et al., 2008). Family studies also show that first degree relatives of probands were more than two to three times as likely to also share a diagnosis. Further, infants easily distressed by unfamiliar stimuli are at an increased risk for becoming fearful during childhood and by adolescence, show increased risk of developing social phobia (Kagan, 1997).

(2) Psychological Perspective

Behavioural Explanation: SAD in many cases is a result of direct or vicarious classical conditioning. In a study, 56 percent of people with specific SAD and 44 percent with generalized SAD reported direct traumatic conditioning experiences (Townesley et al., 1995). People with generalized SAD may be especially likely to have grown up with parents who were socially isolated or who devalued sociability, thus providing ample opportunity for vicarious learning (Rosenbaum et al., 1994). Also, many people with social phobia reported to develop it while having problems in fitting in within their peer group (Harvey et al., 2005).

Cognitive Factors: Socially anxious people are more concerned about evaluation than people who are not anxious (Goldfried, Padawer, & Robins, 1984) and are more aware of the image they present to others (Bates, 1990). They tend to view themselves negatively even when they have actually performed well in social interactions (Wallace & Alden, 1997). In a study by Davison & Zigheboim (1987) which used *articulated thoughts in simulated situations*, it was reported that people with social phobia showed more negative articulated thoughts in a stressful situation in comparison to people without social phobia. Persistent and irrational fears actually occurs because fear is elicited through early automatic processes that are not available to conscious awareness. After this initial processing the stimulus is avoided, so it is not processed fully enough to allow the fear to extinguish (Amir, Foa, & Coles, 1998).

Social Skills Deficit Model: According to this model, inappropriate behaviour or a lack of social skills is the cause of social anxiety. The individual has not learned how to behave so that he/she feels comfortable with others. The person repeatedly commits faux pas (*tactless mistake*), person is awkward and socially inept often criticized by social companions. Support for this model comes from findings that socially anxious people are indeed rated as being low in social skills (Twentyman & McFall, 1975).

Perception of Uncontrollability and Unpredictability: Submissive and unassertive behaviour which is a characteristic feature of people with social phobia is a result of uncontrollability and unpredictability in life situations. People with social phobia have a diminished sense of personal control over events in their lives (Cloitre et al., 1992).

(3) Evolutionary perspective

According to Ohman et al., 1985, social phobias may have developed as a “by-product of dominance hierarchies”. Aggressive encounters between members of a social group establish dominance hierarchies where a defeated individual usually displays fear and submissive behavior but rarely escapes from the situation. Thus, people with social phobia are more likely to endure being in the feared situation than to run away. Perhaps, social phobias develop mostly in adolescence and early adulthood when dominance conflicts are most prominent.

Preparedness and Social Phobia: Ohman and colleagues (1985) have suggested that we humans may have an evolutionary based predisposition to acquire fears of social stimuli that signal dominance and aggression (e.g., anger or contempt) from other humans. The researchers have reported that participants develop stronger conditioned responses when slides of angry faces are paired with mild electric shock than when happy or neutral faces are paired with the same shocks. Further, even very brief presentations of the angry face that are not consciously perceived are sufficient to activate the conditioned responses (Ohman, 1996).

Treatment of Social Phobia

Main treatment options used by people for social phobia are:

(1) Cognitive-Behavioral Therapy:

Cognitive restructuring along with behavioral techniques has been proved to be more effective as compared to lone use of behavioral therapy (Barlow et al., 2007). The distorted cognitions of client that lead to social phobia, such as, “nobody likes me”; “people do not find me attractive” are identified and the therapist helps the client to restructure such negative cognitions through reanalysis. During the reanalysis, the client is educated about the origin of cognitive distortions, the automatic negative thoughts and how these affect the client’s social behavior and restructuring such thoughts by cognitive techniques, for example, questioning the validity of such negative thoughts, taking negative thoughts as hypotheses and logically testing those hypotheses. The clients are also encouraged to do exercises where they are taught to shift their focus from self to others and the situations. Videotaping their social interactions has also been successfully used as a feedback mechanism (Mörtberg et al., 2007).

(2) Medications:

Research has also shown that medications such as antidepressants (e.g., Monoamine Oxidase Inhibitors, or MAOIs and Selective Serotonin Reuptake Inhibitors, or SSRIs) have been proved to be effective treatment for social phobia (Ipser et al., 2008). However, further comparative research in this area has reported the cognitive-behavior therapy to be more effective than the medications as it does not involve side effects and relapse rates are also low (Stein & Stein, 2008). Lastly, researchers such as Guastella et al. (2008) have reported that a medication, named D-cycloserine taken in conjunction with cognitive-behavior therapy led to faster rates of successful treatment.

8.5 PANIC DISORDER: CLINICAL FEATURES, CAUSES AND TREATMENT

Clinical Features

DSM-5 defines a panic attack as a discrete period of intense fear or discomfort, in which at least four from a list of 13 standard symptoms develop abruptly and reach a peak within 10 minutes. Although the symptoms must peak within 10 minutes, the attacks often peak within a few seconds and the symptoms gradually subside over a period lasting from a few minutes to about half an hour.

Box 8.3: Criteria for Panic Disorder according to DSM-5 (APA, 2013)

A. Recurrent unexpected panic attacks. A panic attack is an abrupt surge of intense fear or intense discomfort that reaches a peak within minutes, and during which time four (or more) of the following symptoms occur:

Note: The abrupt surge can occur from a calm state or an anxious state.

- 1) Palpitations, pounding heart, or accelerated heart rate.
- 2) Sweating.
- 3) Trembling or shaking.
- 4) Sensations of shortness of breath or smothering.
- 5) Feelings of choking.
- 6) Chest pain or discomfort.
- 7) Nausea or abdominal distress.
- 8) Feeling dizzy, unsteady, light-headed, or faint.
- 9) Chills or heat sensations.
- 10) Paresthesias (numbness or tingling sensations).
- 11) Derealization (feelings of unreality) or depersonalization (being detached from oneself).
- 12) Fear of losing control or “going crazy.”
- 13) Fear of dying.

Note: Culture-specific symptoms (e.g., tinnitus, neck soreness, headache, uncontrollable screaming or crying) may be seen. Such symptoms should not count as one of the four required symptoms.

B. At least one of the attacks has been followed by 1 month (or more) of one or both of the following:

- 1) Persistent concern or worry about additional panic attacks or their consequences (e.g., losing control, having a heart attack, “going crazy”).
- 2) A significant maladaptive change in behavior related to the attacks (e.g., behaviors designed to avoid having panic attacks, such as avoidance of exercise or unfamiliar situations).

- C) The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism, cardiopulmonary disorders).
- D) The disturbance is not better explained by another mental disorder (e.g., the panic attacks do not occur only in response to feared social situations, as in social anxiety disorder; in response to circumscribed phobic objects or situations, as in specific phobia; in response to obsessions, as in obsessive-compulsive disorder; in response to reminders of traumatic events, as in posttraumatic stress disorder; or in response to separation from attachment figures, as in separation anxiety disorder).

It is clear from the above list that out of 13, majority (1 to 10) of the symptoms are physical whereas only last three are cognitive symptoms. In addition to these symptoms, panic attacks may be accompanied by other symptoms as well (e.g., blurred vision).

Panic attacks are experienced across all the anxiety disorders, triggered by a feared situation object/situation/thought/worry. Many people without an anxiety disorder may experience panic attacks from time to time (e.g., when giving a formal presentation or taking an exam, or upon encountering some other stressful situation). Panic attacks occur frequently in the general population, with some studies showing that up to a third of individuals experience a panic attack during a given year. Unlike most panic attacks, which are typically triggered by stress, worries, or feared situations, the panic attacks that occur in panic disorder often occur out of the blue, without any obvious trigger or cause.

Types of Panic Attacks

Cued or situationally predisposed panic attacks: Panic attacks linked to specific situations such as, driving a car. They are strongly associated with situational triggers.

Uncued panic attacks: Attacks may occur in unexpected or benign states or in the absence of any provocation, e.g., in sleep which is known as nocturnal panic.

In case of some people, panic disorder may lead to agoraphobia. In DSM-5 panic disorder is diagnosed as with or without agoraphobia. The term agoraphobia comes from the Greek word, *agora* which means *market*; hence it means a "*fear of the marketplace*." Though it implies a fear of open spaces, however, people having agoraphobia are much more fearful of enclosed spaces, such as tunnels, small rooms, and elevators. Some people with panic disorder develop a concern that they will not be able to make an exit from a crowded place if they have a panic attack. Hence, they avoid going to places where they believe that their escape would be difficult in an emergency (i.e., panic attack) and it would cause embarrassment to them. At first, people avoid those situations where they developed agoraphobia but soon it gets generalized and they begin to avoid not only places outside home, such as market, elevators, public transport but sometimes places within home also, e.g., attic, terrace which they believe would be difficult to escape from. Most but not all, people with panic disorder develop at least

some degree of agoraphobia. In extreme cases, an individual with panic disorder and agoraphobia may not leave the house at all. Usually people with agoraphobia are able to leave the house, if someone they know accompanies them whom they believe will be able to help them in making a safe exit in case of a panic attack.

Comorbidity: Many people (83 percent approximately) suffering from panic disorder with or without agoraphobia also have some other psychological disorder such as GAD, specific phobia, social phobia, depression, substance use disorder (such as smoking and alcohol consumption) and avoidant personality disorder (Bernstein et al., 2006).

Prevalence, gender differences and age of onset: Lifetime prevalence for panic disorder with or without agoraphobia has been reported to be 4.7 percent, but panic disorder without agoraphobia is more prevalent. Prevalence varies cross-culturally, e.g., in Africa; it was diagnosed in about 1 percent of men and 6 percent of women (Hollifield et al., 1990). In Taiwan, prevalence is quite low, perhaps because of a stigma about reporting a mental problem (Weissman et al., 1997). Among the Eskimo of west Greenland, e.g., *Kayak Angst* occurs in seal hunters who are alone at sea. Attacks involve intense fear, disorientation, and concerns about drowning.

Panic Disorder with and without agoraphobia is more prevalent in women than in men with a prevalence of 5 percent and 2 percent, respectively (Kessler, Chiu, et al., 2005c). About 80 to 90 percent of patients with agoraphobia are reported to be women (White & Barlow, 2002). However, evidence has been found that men with agoraphobia often indulge in self-medication with nicotine and alcohol to endure panic attacks and often do not develop avoidance behavior as has been found in agoraphobia (Starcevic et al., 2008). Panic disorder is a debilitating disorder. Though its symptoms may increase or decrease at times however, it has a chronic course. Recovery may take a long time (12 years as reported in a longitudinal study) with recurrence in 58 percent of the patients (Bruce et al., 2005).

The age of onset has been found to be 23 to 34 years on an average. For women it usually starts in 30s or 40s (Kessler, Chiu, et al., 2006). Its onset is associated with stressful life experiences (Pollard, Pollard, & Corn, 1989).

Causes of Panic Disorder

The causes of panic disorder involves the interplay of many factors.

(1) Biological Perspective

Genetic Variables: Family and twin studies have pointed toward a genetic component in the development of panic disorder. Kendler et al. (2001) reported a variance of 33 to 43 percent due to genetic factors in a large twin study that analyzed the factors for inheritability of panic disorder. Like other anxiety disorders, people with neuroticism are more likely to develop panic disorder. Recently, researchers have attempted to find specific genes that are responsible for inheriting panic disorder. However, Strug et al., 2010; Klauke et al., 2010, found no unequivocal results.

Brain Activity: Earlier theories suggested the role of locus coeruleus (LC) in the brain stem and norepinephrine, a neurotransmitter particularly involved in the activity of LC in causing panic attacks. Stimulation of this area in

the monkeys causes a panic attack. Hence, it was suggested that naturally occurring attacks might be due to over activation of norepinephrine in LC (Redmond, 1977). Research with humans also found that Yohimbine, a drug that stimulates activity in LC could elicit panic attack in patients with panic disorder (Charney et al., 1987). However, more recent research is not consistent with this position, for example, drugs that block firing in the LC were unable to treat patients with panic disorder (McNally, 1994). Later research found that an overactive amygdala rather than LC is implicated in panic disorder. Amygdala consisting of a group of nuclei is located in front of the hippocampus in the limbic system and its role in emotion of fear has been established through empirical research. Stimulation of amygdala stimulates LC and other autonomic responses occurring during panic attack (Gorman et al., 2000). Amygdala is said to be at the center of the “fear network” and is connected to the lower brain areas like LC as well as higher cortical areas like prefrontal cortex. Hence, panic attacks may occur either due to stimulation of lower or higher areas of brain.

Dysfunctional Biochemistry: Klein (1981) and Sheehan (1982) hypothesized that biochemical dysfunctions lead to panic attacks which are the alarm reactions. For more than two decades this hypothesis was supported by several studies. These studies showed that in comparison to normative group, when people with panic disorder are exposed to panic provocation procedure, they are more likely to suffer from panic attacks. The panic provocation procedure involves exposure to biological challenges, such as inhaling air with higher than normal level of carbon dioxide (Woods et al., 1987), taking large amounts of caffeine (Uhde, 1990), infusing sodium lactate into the body (Gorman et al., 1989), to induce intense physical symptoms such as palpitations, high blood pressure and hyperventilation that is likely to evoke a panic attack. The noradrenergic and serotonergic systems are known to be involved in panic attacks (Graeff & Del-Ben, 2008). The noradrenergic system gets activated due to stress and in turn leads to cardiovascular symptoms which provoke panic attack. On the other hand, serotonergic system’s activation decreases the noradrenergic activity. This has been supported by the medication results, as drugs used for treatment of panic disorder not only decrease the noradrenergic activity, but it also increases the serotonergic activity. Another neurotransmitter, GABA, which has an inhibitory effect on anxiety has also been found to be abnormally low in people with panic disorder. Thus, such people suffer from anxiety in anticipation of suffering from another panic attack.

(2) Psychological Perspective

Behavioral Factors: Several researchers have suggested that a comprehensive learning theory can account for the development of panic disorder (Bouton, 2005; Mineka & Zinbarg, 2006). Goldstein and Chambless (1978) have studied the effect of interoceptive (internal to body) and exteroceptive (external to body) stimuli in conditioning of panic disorder. Through classical conditioning, interoceptive cues like heart palpitations, stomach ache, and exteroceptive cues such as a place or presence of specific people that were present during the initial panic attack, gets associated with it and later on act as triggers for anxiety about future panic attacks (Acheson et al., 2007). In simple words, people end up developing a “panic” about a

“panic attack”! This also explains the agoraphobic avoidance of places like markets or shopping malls as these serve as exteroceptive cues for an oncoming panic attack. Inhibitory learning which is required for extinction of a conditioned response has been suggested to be impaired in panic disorder, thus people with panic disorder are unable to learn to discriminate the conditioned stimulus as a safety cue (Lissek et al., 2009). However, panic attacks sometimes seem to be uncued, i.e., no trigger, internal or external, seems to be present before the panic attack. This is because panic attack in some cases result from the internal cues that are unconsciously experienced by the individual. This can be understood with an example of a person frightened of a racing heart and who while feeling happy and excited gets a panic attack and is unable to understand the reason of it as he/she was happy. The panic attack in this case occurred because while feeling happy and excited the person’s heart raced which served as a cue (though not in awareness of that person) for the panic attack (Mineka & Zinbarg, 2006).

Cognitive factors: People with panic disorder have hypersensitivity for their bodily sensations which are interpreted by them as a sign of an impending panic attack (Beck & Emery, 1985; D. M. Clark, 1986, 1997). The tendency to interpret bodily sensations as a sign of impending catastrophe such as a heart attack, tumors etc. has been called *catastrophizing* by Clark.

Such frightening thoughts start the vicious cycle as it increases the already present physical symptoms of anxiety which in turn increase the catastrophic thoughts which in turn triggers the panic attack. It should be noted that the person may be unaware about catastrophizing as these thoughts are out of consciousness (Rapee, 1996). Beck has called these thoughts as automatic thoughts which actually trigger the panic attack. However, the cause of developing catastrophizing thoughts is not known, nevertheless only those people who have a tendency for catastrophizing develop panic disorder (e.g., Clark, 1997). Evidence has been found in line with this theory, e.g., Clark (1997) and Teachman et al. (2007) have reported that individuals with panic disorder have a greater tendency to catastrophize their bodily sensations. This cognitive theory of panic disorder also predicts that model also predicts that the panic can be reduced or prevented by changing people’s cognitions about their bodily sensations. Further, likelihood of panic attacks was significantly reduced when people suffering from panic disorder were given a detailed explanation of what physical symptoms to expect when injected with sodium lactase in a panic provocation study (Clark, 1997; Schmidt et al., 2006).

Both learning and cognitive theories provide explanations about panic attack, however the main difference between the two theories is the emphasis that the cognitive theory puts on the meaning that people with panic disorder give to their bodily sensations. Such interpretation of bodily sensations is not necessary for conditioning as the interoceptive or exteroceptive stimuli could be outside the realm of awareness (Bouton et al., 2001). In the light of this difference, learning theory is better able to account for uncued panic attacks as well as panic attacks while sleeping as both occur in the absence of automatic cognitions.

Anxiety Sensitivity and Perceived Control: Several explanations have been provided that can find support in both learning and cognitive perspectives.

For example, McNally (2002) and Pagura et al. (2009) found that people with hypersensitivity to anxiety are more likely to develop panic attacks and subsequently panic disorder. Interestingly, some studies have also shown the role of perceived control in reduction and even prevention of panic attacks, e.g., in a panic provocation study if a person has a control over inhalation of carbon-dioxide (inhalation of CO₂ is known to bring on panic), the possibility of suffering from a panic attack is reduced significantly or even blocked (e.g., Sanderson et al., 1989; Zvolensky et al., 1998, 1999). Further, Bentley et al. (2012) have shown that anxiety sensitivity interacts with perceived control for the development of panic attack, i.e., lower the perceived control, greater was the effect of anxiety effect on panic disorder. Lastly, higher the perceived control over emotions and threatening situations, lower was the agoraphobic avoidance as the person feels in control of the situation (Suarez et al., 2009; White et al., 2006).

Safety Behaviors and the Persistence of Panic: Panic disorder once developed is maintained despite contrary evidence. That is, someone who has always suffered from a panic attack about having a heart attack on finding his/her heart racing but never actually had a heart attack should understand that a racing heart does not lead to a heart attack. But this logic does not prevent a panic attack because each time the person was apprehending a heart attack he/she indulged in a “safety behavior” like slow breathing and believed that this “safety behavior” prevented the heart attack. Thus, the “safety behaviors” maintain the panic disorder. Thus, people with panic disorder should be persuaded to abandon the “safety behaviors” so that they could realize that their indulgence in safety behaviors does not prevent the heart attack or any other impending fatality like fainting (Clark, 1997; Salkovskis et al., 1996). Research suggests that dropping of safety behaviors by people with panic disorder increased the effectiveness of the treatment (Rachman et al., 2008).

Cognitive Biases and the Maintenance of Panic: People with panic disorder have a tendency for processing the threatening information in a biased manner. For example, such people interpret the ambiguous bodily sensations as well as other ambiguous situations as more threatening than the people in the control group (Clark, 1997; Teachman et al., 2006). Also, such people have a biased attention also as they focus more on the threatening information, such as words indicating panic like palpitations, numbness, fainting etc. (Lim & Kim, 2005; Mathews & MacLeod, 2005). fMRI studies have shown greater activation of memory areas that are involved in processing information about threatening stimuli in people with panic disorder than the normative group (Maddock et al., 2003). However, the role of biased information processing as a cause or as a symptom of panic disorder remains unclear.

Overall, it can be concluded that both biological and psychosocial factors have been found to play a role in the development of panic disorder and neither of the two in isolation can explain its development.

Treatment of Panic Disorder

The approaches to treatment of panic disorder are as follows:

(1) Exposure Therapy

As explained in the above section on phobias, exposure therapy for agoraphobia and panic involves exposing the client to the feared situation for a long period of time often in the presence of the therapist or a family member. The underlying idea is that the client on being exposed to the feared situation for a long time without eliciting any harmful effects help him/her to realize the futility of his/her agoraphobia with panic attacks. This exercise has been shown to be effective in treating 60 to 75 percent of people with agoraphobia and a maintenance rate of 2-4 years (Barlow et al., 2007). A limitation of this therapy was that it did not deal with panic disorder specifically. Hence, another technique, known as *interceptive exposure* was devised to deal with panic attacks in 1980s. This technique involves causing internal bodily sensations such as spinning head, nausea, breathlessness which are associated with panic attacks with the help of activities like seating a client in a spinning or rocking chair. When the client undergoes a prolonged exposure to such situations without getting a panic attack, the association of the internal bodily cues to panic attacks gets extinct.

(2) Integrative technique

Cognitive restructuring integrated with exposure therapy used specifically to treat panic disorder is known as panic control treatment. It involves educating the client about the role of catastrophic automatic thoughts in causing and maintaining the panic disorder. During the therapy, the client is taught to identify the negative automatic thoughts and dispute those in a logical manner, using techniques like hypotheses testing and humor. Then the client is exposed to the panic eliciting situations (both internal bodily sensations and external cues) to develop tolerance against the discomfort caused by such situations. This helps the client to deal with panic causing situations efficiently. Research evidence has shown the integrative technique to be more effective than using either the exposure or cognitive restructuring technique alone (Arch & Craske, 2009). It has proven to be effective in 70-90 percent of clients and maintenance rate of 1 to 2 years has also been reported (McCabe & Gifford, 2009).

(3) Medications

Medicines like anxiolytics (anti-anxiety drugs) and antidepressants have also shown to be effective in treating agoraphobia and panic. Researches, however conclude that both drugs have advantages and disadvantages also. Anxiolytics which belong to the category of benzodiazepines include drugs like alprazolam or clonazepam which have been shown to treat acute episodes of extreme anxiety as these drugs work quickly (within 30-60 minutes). However, these also have side effects such as drowsiness, sedation, impaired cognitive as well as motor performance. Additionally, physiological dependence may also develop because of prolonged use and lead to withdrawal symptoms like sleep disturbance, dizziness and panic attacks. Relapse rate is also quite high (Pollack & Simon, 2009). Antidepressants including tricyclics, SSRIs and SNRIs (Serotonin-Norepinephrine Reuptake Inhibitors) used for treating panic disorder and agoraphobia also have advantages and disadvantages in comparison to anxiolytics. Some advantages of antidepressants are that these treat the

comorbid depression and do not lead to physiological dependence (Pollack & Simon, 2009). However, a disadvantage of antidepressants is that in comparison to anxiolytics, these take longer time (approx. 4 weeks) to act, hence, cannot be used in acute cases of panic disorder. Other side effects include, dry mouth, severe constipation, blurred vision etc. Lastly, relapse rates are quite high when discontinued (Roy-Byrne & Cowley, 2007).

Though a combination of cognitive-behavior therapy and medication therapy has found to be slightly more effective (Barlow et al., 2007). However, it has been found that once the medication is discontinued, relapse is common as perhaps many of the clients attribute their treatment gains to medication (Mitte, 2005). Nevertheless, a drug named D-cyloserine used in combination of CBT has shown promising results (Otto et al., 2009).

Self Assessment Questions 2

1. What are the two subtypes of social anxiety disorder?
2. According to which model, inappropriate behaviour or a lack of social skills is the cause of social anxiety?
3. Questioning the validity of negative thoughts can lead to _____ of thoughts.
4. The term agoraphobia according to its origin from the Greek word, means a fear of _____.
5. The term interoceptive refers to stimuli _____ to body, and exteroceptive refers to stimuli _____ to body.
6. Panic control treatment to treat panic disorder combines _____.

8.6 GENERALIZED ANXIETY DISORDER: CLINICAL FEATURES, CAUSES AND TREATMENT

Clinical Features

Generalized Anxiety Disorder (GAD) is a state of chronic, excessive and unreasonable worry about multiple life events or activities. Since anxiety is not anchored to a specific object or situation as in phobias, it was earlier described as free-floating anxiety (Butcher, Hooley, Mineka, & Dwivedi, 2017). Individual with GAD is persistently anxious often about minor things, and worry chronically (Davison, Neale, & Kring, 2004). People with GAD spend a great deal of time worrying about a wide range of topics and describe their worrying as uncontrollable (Ruscio, Borkovec, & Ruscio, 2001).

The clinical features of GAD, as per DSM-5, is given below in Box 8.4.

Box 8.4: DSM-5 Criteria for Generalized Anxiety Disorder (APA, 2013)

- A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for a period of at least 6 months, about a number of events or activities (such as work or school performance).

- B. The person finds it difficult to control the worry.
- C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months).
- Note: Only one item is required in children.
- 1) restlessness or feeling keyed up or on edge
 - 2) being easily fatigued
 - 3) difficulty concentrating or mind going blank
 - 4) irritability
 - 5) muscle tension
 - 6) sleep disturbances (difficulty falling or staying asleep, or restless unsatisfying sleep)
- D. The focus of the anxiety and worry is not confined to features of an Axis I disorder, e.g., the anxiety or worry is not about having a Panic Attack (as in Panic Disorder), being embarrassed in public (as in Social Phobia), being contaminated (as in Obsessive-Compulsive Disorder), gaining weight (as in Anorexia Nervosa), having multiple physical complaints (as in Somatization Disorder), or having a serious illness (as in Hypochondriasis), and the anxiety and worry do not occur exclusively during Posttraumatic Stress Disorder.
- E. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- F. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism) and does not occur exclusively during a Mood Disorder, a Psychotic Disorder, or a Pervasive Developmental Disorder.
- (Note: No changes were made from DSM-IV to DSM-5)

Comorbidity

GAD is associated with functional impairment and increased risk of adverse health outcomes, including cardiovascular disease and suicide (Keller, 2002). It is also frequently found in conjunction with other psychiatric conditions, including depression (Wells & Butler, 1997; Brown et al., 2001), panic disorder, posttraumatic stress disorder, and social phobia (Kessler & Wittchen, 2002).

Prevalence: GAD is common, with a prevalence rate of 3 percent for a period of any 1 given year and a lifetime prevalence of 5.7 percent (Kessler, Berglund, Dealer, et al. 2005). Lifetime prevalence in India is 5.8 percent (Chandrashekar & Reddy, 1998).

Age of onset: Nearly 60 to 80 percent people with GAD report that they have been anxious for as long as they remember whereas many others have reported a slow and insidious onset (Roemer et al., 2002). It is difficult to determine the age of onset, but research has suggested that older adults

often develop it and it is the most common anxiety disorder for them (e.g., Mackenzie et al., 2011).

Course: GAD is a chronic disorder. A twelve-year follow-up study reported that 42 percent of the people diagnosed with GAD did not remit even after 13 years and nearly 50 percent of those who remitted had a recurrence (Bruce et al., 2005). Though it tends to disappear after age 50 for many people, it is usually replaced by somatic symptoms disorder with physical health concerns (Rubio & Lopez-Ibor, 2007). It is a common and a chronic disorder, however, in spite of high levels of worry and perceived low well-being, most of the people with GAD manage their lives though with some role impairment. As compared to panic disorder or major depressive disorder which are more debilitating disorders, people with GAD are less likely to avail the psychological treatment facilities, because they usually visit physicians with physical complaints like muscle ache, gastrointestinal problems etc. (Hofmann et al., 2010).

Gender ratio: GAD is twice as common in women as in men (Rickels & Schweizer, 1997).

General characteristics of people with GAD

- People suffering from GAD live in a relatively constant state of diffuse uneasiness, tension, and worry.
- They are almost always in an anxious apprehension, defined as a future oriented mood state in which a person constantly attempts to be ready to deal with any upcoming negative events.
- There is chronic over arousal along with high levels of negative affect, and a sense of uncontrollability (Barlow et al., 1996).
- Decision making is difficult as they have poor concentration and dread to make mistakes.
- They often unsuccessfully attempt to avoid anxiety by procrastinating or indulging in checking activities.
- They are hyper-vigilant for all possible signs of threat in their environment.
- There are frequent complaints of muscle tension and aches in the neck and upper shoulder region.
- Sleep disturbances, such as insomnia, nightmares and sometimes hypersomnia (excessive sleep) to escape from anxiety are often reported.
- Such people feel upset, uneasy, and discouraged due to constant worries.
- Family, finances, work, and personal illness were found to be the most common life areas of worry (Roemen, Molina, & Borkovec, 1997).
- Decision making is difficult for them and they worry endlessly over possible errors that they might have made while deciding.
- Real and imagined mistakes committed currently or in the past are often reviewed after going to bed.
- All the possible future difficulties are anticipated by them.

- They are unable to logically think that it is useless to trouble oneself with future outcomes which are beyond one's control.
- Failure to control their tendency to worry gives them a feeling of helplessness.

Causes of GAD

(1) Biological Perspective

Genetic Factors: There is mixed evidence for genetic factors, however, a modest genetic component for GAD has been reported (Hettema, Neale, & Kendler, 2000). Among the research studies carried out so far, one of the largest and most recent twin studies has reported a variance of 15 to 20 percent in liability to GAD due to genetic component. In other words, there is higher concordance rate for GAD in MZ than DZ twins. Further, strong evidence has been found for a common underlying genetic predisposition for GAD and major depressive disorder (MDD) (Kendler et al., 2007). Nevertheless, whether a person with a genetic risk for GAD or MDD will develop the disorder/s is determined by the environmental factors (nonshared environment). A basic personality trait called neuroticism has been conceptualized as the common underlying predisposition for developing GAD and MDD (Kendler et al., 2007).

Neurochemical and Neurohormonal Factors: Neurobiological model is based on the research conducted between 1950s and 1970s on the operations of *benzodiazepines*, a group of drugs that are effective in the treatment of anxiety. Researchers discovered a receptor in the brain for benzodiazepines that is linked to the inhibitory neurotransmitter, Gamma Amino Butyric Acid or GABA. In normal fear reactions, neurons throughout the brain fire and create the experience of anxiety. This neural firing also stimulates GABA system, which inhibits this activity and reduces anxiety. GAD may result from some defect in the GABA system so that anxiety is not brought under control. The benzodiazepines may reduce anxiety by enhancing the release of GABA. GABA, serotonin and norepinephrine have been suggested to play a role in anxiety (LeDous, 2002), but their interaction remains largely unknown till date (Butcher et al., 2017).

The Corticotropin Releasing Hormone (CRH): The CRH plays a role in GAD as it is an anxiety producing hormone. When CRH is activated by stress or perceived threat, it stimulates the pituitary gland which in turn releases the adrenocorticotrophic hormone (ACTH). The ACTH stimulates the adrenal gland which in turn releases the stress hormone called cortisol. The CRH is believed to play an important role in GAD as it has been discovered to affect the bed nucleus of the extension of amygdala which mediates generalized anxiety (Davis, 2006).

(2) Psychoanalytic Perspective

Generalized anxiety is the result of a constant unconscious struggle between id impulses and ego. Id impulses are aggressive and sexual in nature, and struggle for expression whereas the ego because of its unconscious fear of being punished, does not let id express its desires. Since the source of anxiety is unconscious, person does not know the reason for anxiety and as a result is always anxious and apprehensive. The person cannot evade anxiety

as he/she can not escape from id, for escape from id means that the person is no longer alive. Furthermore, since anxiety is not displaced onto a specific object or situation as it happens in the case of phobia, hence the person is anxious nearly all the time. But due to lack of empirical verification, this viewpoint is not clinically accepted.

Behavioural Perspective

According to Wolpe (1958), the elicitors of anxiety may be environmental factors, e.g., other people or social situations. A person who spends most hours of his/her day with other people may be anxious because of the people or the social situations and not because of any internal factors, i.e., the person learns to associate their anxiety with the presence of other people.

Cognitive-Behavioral Perspective

The main underlying idea is that GAD results from distorted cognitive processes. People with GAD often misperceive benign events, such as crossing the street as involving threats, and their cognitions focus on anticipated future disasters (Beck et al., 1987). Their attention is easily drawn to threatening stimuli (Mogg, Miller, & Bradley, 2000). Studies have shown that in contrast to non-anxious people, generally anxious people tend to notice threat cues when presented with a mixture of threat and non-threat cues (Mineka et al., 1998). Furthermore, they are more inclined to interpret ambiguous stimuli as threatening and to rate ominous events as more likely to occur to them (Butler & Matthews, 1983). The heightened sensitivity to threatening stimuli occurs even when the stimuli cannot be consciously perceived (Bradley et al., 1995).

Uncontrollable and unpredictable aversive events are much more stressful and hence more anxiety provoking than the controllable and predictable events. People with GAD may have a history of experiencing many important life events as unpredictable and uncontrollable (Mineka & Zinbarg, 1998). Early experience with control and mastery can immunize to some extent against the harmful effects of exposure to stressful situations and may in turn immunize against GAD (Barlow et al., 1998).

Borkovec et al. (1998) have proposed another cognitive view as they focused on the various functions served by worry. Worry can be negatively reinforcing; it may serve five positive functions for people with GAD:

- Superstitious avoidance of catastrophe (worrying will lessen the likelihood of a feared event);
- Actual avoidance of catastrophe (worrying helps to generate ways of avoiding catastrophe);
- Avoidance of deeper emotional topics (worrying distracts from more troublesome emotions);
- Coping and preparation; and
- Motivating device (helps in motivating oneself to work).

A subset of people with GAD believe that worry has positive functions, which in turn helps in maintenance of high levels of anxiety (Dugas et al., 2007). Worrying is self-sustaining as it does not produce much emotional arousal, e.g., it does not produce the physiological changes that usually

accompany emotion, and it blocks the processing of emotional stimuli. Despite its positive functions, worry has some negative consequences as well (Newman & Liera, 2011). Worry is not an enjoyable activity as it involves thinking about the negative catastrophic outcomes and can lead to a greater sense of anxiety and danger. According to Wells and Papageorgio (1995), it may lead to more intrusive thoughts as they found in a study that involved three groups watching a gruesome movie in three conditions. After watching the movie, one group was told to relax, the second group was told to imagine the events in the movie and the third group was asked to verbally worry about the movie. It was found that people in the third group had more intrusive thoughts as compared to the other two groups after several days of watching the movie. Worrying also leads to more intense negative emotions (Newman & Libera, 2011). Further, there is evidence for paradoxical effect of worry also, that is, attempts to control worry leads to more intrusive thoughts which lead to a feeling of uncontrollability. This in turn leads to anxiety which further enhances worry. Thus, it leads to a vicious cycle of worry, intrusive thoughts and anxiety (Mineka & Zinbarg, 2006).

Treatment of GAD

Psychological therapy and medication are used as treatment options for GAD.

- (1) **Cognitive-Behavioral Therapy (CBT):** As has been described in the above sections, CBT uses a combination of behavioral techniques such as progressive muscle relaxation exercises (to relieve the physiological symptoms, such as breathlessness, muscle tension) and cognitive techniques, such as cognitive restructuring (for dealing with the psychological symptoms, such as anxiety, cognitive distortions, catastrophizing, etc), (Barlow, Allen, & Basden, 2007). Though, GAD has been known as one of the most difficult among anxiety disorders to treat, nevertheless, research review has found the CBT to successfully alleviate the symptoms of GAD (Mitte, 2005). Interestingly, research has shown CBT to be as effective as benzodiazepines and it has also helped to taper off long usage of medication (Gosselin et al., 2006).
- (2) **Medications:** Often, people suffering from GAD consult general practitioners (GPs) for somatic systems such as muscle aches, tingling sensations, numbness, breathlessness etc. and are prescribed benzodiazepines or anxiolytics, such as alprax, restryl (market names). These drugs lead to symptom relief, and are more effective in alleviation of physiological rather than psychological symptoms. But these drugs can lead to psychological and physiological dependence. Buspirone is a new drug which is more effective in alleviating psychological symptoms like anxiety and does not lead to sleepiness and psychological or physiological dependence but it takes a longer time (2 -4 weeks) to show effect (Roy-Byrne & Cowley, 2007). Similarly, some antidepressants have also proved to be beneficial in treating GAD, but these also take a long time (several weeks) to show their effect (Goodman, 2004).

Self Assessment Questions 3

1. Generalized Anxiety Disorder was earlier described as _____.
2. The psychoanalytic perspective of the occurrence of GAD involves _____.
3. People with generalized anxiety disorder reflect a _____ oriented mood state.
4. According to which perspective, anxious people are generally more inclined to interpret ambiguous stimuli as threatening?

8.7 LET US SUM UP

Let us now list all the major points that we have learned in this Unit.

- Main anxiety disorders identified by DSM-5 are specific phobia, social phobia, panic disorder, and generalized anxiety disorder.
- A phobia is a persistent and disproportionate fear of a specific object or situation that presents little or no actual danger to a person.
- According to DSM-5, Specific phobia, previously known as simple phobia, has five sub types: animals (e.g., snakes, spiders, dogs); natural environment (e.g., water, heights, storms); blood-injection-injury; situational (bridges, tunnels); others (vomiting, choking, ‘space phobia’ where the person has a fear of falling down if he/she is away from walls or support).
- Phobias develop as a result of psychological, behavioural, biological, evolutionary, or cognitive factors.
- A social phobia is a persistent, irrational fear generally linked to the presence of other people. It can be extremely debilitating.
- The difference between social phobia and social anxiety disorder (SAD) is largely chronological, in that social phobia is the former term and SAD is the current term for the disorder.
- Panic disorders are characterised by panic attack which are a discrete period of intense fear or discomfort, in which at least four from a list of 13 standard symptoms develop abruptly and reach a peak within 10 minutes.
- Panic attacks are experienced across all the anxiety disorders. Cognitive-behaviour therapy and medication is found to be effective in the treatment of panic disorder.
- Generalized Anxiety Disorder is a state of chronic, excessive and unreasonable worry about multiple life events or activities and is caused due to genetic, psychological, chemical, behavioural or cognitive causes.
- The Corticotropin Releasing Hormone plays a role in GAD as it is an anxiety producing hormone.
- CBT uses a combination of behavioral techniques such as progressive muscle relaxation exercises to relieve the physiological symptoms,

such as breathlessness, muscle tension and cognitive techniques, in the treatment of GAD.

8.8 KEY WORDS

Anxiety: Feeling experienced only in anticipation of danger/threat when such a danger/threat is not present or cannot be specified.

Comorbidity: When two or more disorders or illnesses that occur in the same person.

Panic: Subjective feelings of impending doom, fear of dying, going crazy and losing control.

Panic attack: Discrete period of intense fear or discomfort, in which at least four from a list of 13 standard symptoms develop abruptly and reach a peak within 10 minutes.

Gamma Amino Butyric Acid or GABA: Inhibitory neurotransmitter that helps to keep the feeling of anxiety away

Corticotropin Releasing Hormone (CRH): The CRH plays a role in GAD as it is an anxiety producing hormone.

Phobia: A phobia is a persistent and disproportionate fear of a specific object or situation that presents little or no actual danger to a person.

Social phobia: A persistent, irrational fear generally linked to the presence of other people which can be extremely debilitating.

Agoraphobia: A fear of “agora”, Greek word for public places of assembly or marketplace. It is a fear of crowded places.

Generalized Anxiety Disorder: A state of chronic, excessive and unreasonable worry about multiple life events or activities.

8.9 ANSWERS TO SELF ASSESSMENT QUESTIONS

Answers to Self Assessment Questions 1

1. Real, anticipated
2. Specific phobia, social phobia, and agoraphobia
3. Flooding
4. virtual reality
5. psychoanalytical

Answers to Self Assessment Questions 2

1. The subtypes of social anxiety disorder include - one is specific to performance situations, e.g., public speaking, and the other is general or in non-performance situations, e.g., eating in public
2. Social skills deficit model
3. Restructuring
4. Marketplace

5. Internal, external
6. cognitive restructuring integrated with exposure therapy

Answers to Self Assessment Questions 3

1. Free floating anxiety
2. Conflict between id impulses and ego
3. Future
4. Cognitive-behavioural

8.10 UNIT END QUESTIONS

1. Define anxiety and give the characteristics of anxiety disorders.
2. Explain modeling as the way to treat phobia.
3. What is the DSM-5 criteria of a panic attack?
4. Discuss the causes of social anxiety disorder.
5. Discuss the treatment of panic disorder.
6. What are the characteristics of social phobia?
7. How does cognitive-behaviour therapy help in the treatment of social phobia?
8. Explain the psychoanalytical perspective for the development of GAD.

8.11 REFERENCES AND SUGGESTED READINGS

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Web Resources:

- Watch the video on ‘ what is social Anxiety Disorder?’ (Health Matters, University of California TV).
https://m.youtube.com/watch?v=4truuD_xMPO
- Watch the movie ‘As Good As It Gets’; Directed by James L. Brooks (1997)



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