

chapter eight

Treatment of mental disorders

Key knowledge and skills

This knowledge includes:

- application of a biopsychosocial framework to understanding and managing simple phobia as an example of an anxiety disorder:
 - biological contributing factors: role of the stress response; role of the neurotransmitter gamma-amino butyric acid (GABA) in the management of phobic anxiety
 - psychological contributing factors: psychodynamic, behavioural and cognitive models; the use of psychotherapies in treatment including cognitive behavioural therapy (CBT), systematic desensitisation and flooding
 - socio-cultural contributing factors: specific environmental triggers such as being bitten by a dog; parental modelling and transmission of threat information
 - the interaction between biological, psychological and socio-cultural factors which contribute to an understanding of the disorder and its management
- application of a biopsychosocial framework to understanding ONE of the following types of mental disorder and its management:
 - Mood disorder: major depression
 - biological contributing factors: role of genes in contributing to the risk of developing major depression; roles of the neurotransmitters serotonin and noradrenaline in major depression; the function of antidepressant medication in management
 - psychological contributing factors: learned helplessness; stress; the use of psychotherapies in management including cognitive behaviour therapy and psychodynamic psychotherapy
 - socio-cultural contributing factors: abuse, poverty, social isolation and social stressors as risk factors; support factors, including family and social networks and recovery groups
 - the interaction between biological, psychological and socio-cultural factors which contribute to an understanding of the disorder and its management
 - Addictive disorder: gambling
 - biological contributing factors: role of the dopamine reward system and as a target for treatment
- psychological contributing factors: social learning theory and schedules of reinforcement; the use of psychotherapies in treatment including cognitive behavioural and psychodynamic therapies
- socio-cultural contributing factors: social permission of gambling opportunities; management including social network and recovery groups
- the interaction between biological, psychological and socio-cultural factors which contribute to an understanding of the disorder and its management

Psychotic disorder: schizophrenia

- biological contributing factors: genetic predisposition; drug-induced onset; changes in brain activity; the use of medication that blocks dopamine to treat psychosis
- psychological contributing factors: impaired mechanisms for reasoning and memory; the use of psychotherapies in management including cognitive behavioural and remediation therapies, stress management
- socio-cultural contributing factors: social disadvantage, trauma and psycho-social stress as risk factors; psychoeducation, supportive social (including family) environments, removal of social stigma
- the interaction between biological, psychosocial and socio-cultural factors which contribute to an understanding of the disorder and its management

- research methods and ethical principles associated with the study of mental health.

These skills include the ability to:

- design and conduct investigations using experimental and non-experimental methods such as observation studies, case studies and correlation studies
- process and interpret information, and make connections between psychological concepts and theories
- communicate psychological information, ideas and research findings accurately and effectively.

TREATMENT OF MENTAL DISORDERS

Anxiety disorder: Specific phobia

- Biological contributing factors
- Psychological contributing factors
 - Use of psychotherapies in treatment
- Sociocultural contributing factors

Addictive disorder: Pathological gambling

- Biological contributing factors
- Psychological contributing factors
 - Use of psychotherapies in treatment
- Sociocultural contributing factors

Mood disorder: Major depression

- Biological contributing factors
- Psychological contributing factors
- Use of psychotherapies in treatment
- Sociocultural contributing factors

Psychotic disorder: Schizophrenia

- Biological contributing factors
- Psychological contributing factors
- Use of psychotherapies in treatment
- Sociocultural contributing factors

Is there anybody out there to help?

We saw in chapter 7 how the medley of issues in everyday life could cause us to become stressed. We also saw that stress is a normal response to any kind of pressure situation. However, repetitive, recurrent and ongoing stress can sometimes lead to the development of a psychological disorder such as depression or anxiety.

Learning to recognise the difference between stress and a mental disorder is important because, as opposed to management strategies for coping with stress, treatments for mental disorders are much more comprehensive. We *manage* stress (because it is a normal phenomenon), whereas we *treat* psychological disorders. The word ‘treatment’ probably conjures up images of pills and capsules. Yet interestingly, taking medications is only one part of a good treatment plan available to Australians suffering from mental illness. In this chapter, we will learn more about the different types of treatments such as medications, talking treatments and behavioural modification treatments.

In chapter 7, we saw that health and disease could be understood from a biopsychosocial perspective (see page 228). The biopsychosocial model considers health and illness in the context of biological, psychological and social determinants. In this chapter we will continue to explore how these factors contribute specifically not only to general health, but also to our understanding of mental disorders and their management.

TREATMENT OF MENTAL DISORDERS

People with mental (or psychological) disorders seek treatment because their illness affects their cognition or ability to function in everyday life. Treating a mental disorder is very important, yet many people who do not have a mental disorder do not know what this treatment involves. We gain much of our general information from the media, and information about psychological treatment is no different. As such, the meaning of psychological ‘treatment’ has been influenced for many decades by movies such as *One Flew Over the Cuckoo’s Nest*, *Sybil*, *Analyse This* and *Girl, Interrupted*, to name a few.

However, the fact is that real-world treatment of psychological disorders is somewhat removed from these film depictions; for example, electro-convulsive shock therapy is not depicted very accurately in many films – it is used today in a safe and often very effective way. Additionally, psychologists and other mental health practitioners increasingly use evidence-based therapies to assist people with psychological problems. In most cases, the answer to treating people with mental illness is some form of *psychotherapy*. Psychotherapy is any psychological technique used to facilitate positive changes in personality, behaviour or adjustment. Psychotherapy most often refers to



Figure 8.1 Psychotherapists help clients to understand their maladaptive behaviours and learn new ways to cope with their disorder.

verbal interaction between trained mental health professionals and their clients (see Figure 8.1). Many therapists also use learning principles to directly alter troublesome behaviours.

Psychotherapy is a vast field and there are several schools of thought based on learning theories, behavioural theories, psychodynamic theories and psychoanalytic theories. A psychologist often is educated extensively in the theories behind most of these therapies, but would then specialise in a few modes of treatment, particularly cognitive behavioural therapy, which is discussed later this chapter. It goes without saying that mental health practitioners do not attempt to fit the patient to the therapies they are trained in; rather, they attempt to use treatments that fit the patient’s needs. Most therapists take an eclectic approach to treatment – they design and plan individual treatments and use techniques from several schools of thought to help their patients.

This approach to treatment stems from understanding the framework behind how a mental disorder develops. Every individual brings with them a unique set of experiences, personality attributes and genetic make-up. It is this individual set of characteristics that makes the experience, and treatment, of mental illness different for every sufferer.

Applying a biopsychosocial framework to anxiety disorders

Imagine the feeling of waiting to take an important test for which you are unprepared, waiting to give a speech to a large audience of strangers or being followed by a police car while you drive.

psychotherapy

A psychological technique in the treatment of mental disorders, used to facilitate positive changes in personality, behaviour or adjustment

You've almost certainly felt **anxiety** in one of these situations. Anxiety refers to feelings of apprehension, dread or uneasiness and is a response to an unclear or ambiguous threat. As you may have noticed, the physical reactions that accompany anxiety are similar to those that accompany fear and stress.

Feeling anxious is a very normal emotion, and you probably feel it often. (Complete 'Try it yourself 8.1' to see which objects, events and situations give you a feeling of anxiety.) As we saw with the Yerkes-Dodson curve (chapter 7, page 231), moderate levels of anxiety will improve performance, and sometimes high levels of anxiety will be appropriate when they are consistent with the demands of the situation (see Figure 8.2). However, there is a big difference between feeling anxious some of the time and actually suffering from an anxiety disorder – Figure 8.3 shows these differences. Additionally, people respond to different situations in different ways, so



Figure 8.2 Short periods of higher than normal levels of anxiety can be beneficial. Many snowboarders have found that short periods of increased levels of anxiety lead to an improvement in their performance rate.

if one person feels anxiety in a particular situation while another person does not, this is not evidence that the anxious person is suffering from an anxiety disorder.

So if fear and anxiety are normal emotions, when do they signify a problem? When anxiety is *out of proportion* to a situation, it may be detrimental to an individual's well-being, and result in an **anxiety disorder**. A problem exists when intense or persistent anxiety prevents people from doing what they want or need to do. Their anxieties mean they struggle to preserve control (Zinbarg et al., 1992) – they simply cannot stop worrying. An anxiety disorder may rob us of the capacity to learn new information, plan an appropriate response to an issue, or carry out complex activities that we routinely do in everyday life, thereby revealing a problem (Treatment Protocol Project, 2004).

Individuals with anxiety disorders are known to have specific, recurring fears that they recognise as irrational, unrealistic and intrusive (Treatment Protocol Project, 2004). Typically, people with anxiety-related problems feel threatened, but may not be able to do anything constructive about it. In general, anxiety-related problems involve:

- high levels of physical signs of anxiety
- restrictive, self-defeating behaviour patterns
- a tendency to use elaborate defence mechanisms or avoidance responses to get through the day
- pervasive feelings of stress, insecurity, inferiority, unhappiness and dissatisfaction with life.

Anxiety, fears and phobias are probably the most common psychological disturbances today. A US study found that on any given day, roughly seven per cent of the (USA) adult population could be diagnosed as having an anxiety disorder (Landers, 1989).

There are several individual disorders that fall under the major heading of anxiety disorders; these include Generalised Anxiety Disorder, Panic Disorder, Specific (previously Simple) and Social Phobias, Post Traumatic Stress Disorder, Obsessive Compulsive Disorder, and Anxiety Disorders due to general physical illnesses or substance use. Phobias are the most common of all anxiety disorders.

Normal anxiety	Anxiety disorder
<ul style="list-style-type: none">• Feel apprehension or dread• Can execute complex activities• Can learn new responses• Can plan appropriate responses	<ul style="list-style-type: none">• Recurring, unrealistic and intrusive fear• Avoidance behaviour• Pervasive feelings of stress, insecurity, inferiority, unhappiness and dissatisfaction that cause dysfunction

Figure 8.3 Feeling anxious at times is a very normal emotion – there is a difference between feeling anxious in some situations and actually suffering from an anxiety disorder.

TRY IT YOURSELF 8.1

A feeling of anxiety

The items in the table below are objects and experiences that may cause fear and unpleasant feelings.

- 1 Copy or photocopy the table.
- 2 Use the rating scale to write a number (next to each item) that describes how anxious you feel about the object or experience.

- 3 Discuss these ratings with your classmates. Have you scored high and low for the same items? What may account for these differences in ratings?

Scale: Level of anxiety

1 = no anxiety 2 = a little bit of anxiety 3 = a fair amount of anxiety 4 = much anxiety 5 = very much/extreme anxiety

Going to sleep at night	Travelling by car	Worms	Large dogs	Being interviewed	Studying for exams
Being criticised	Large open spaces	Being introduced to someone	Failure	Crawling insects	Dating someone for the first time
Being alone	Mice	People in authority	Enclosed spaces	Crowds	Giving a class presentation
Feeling rejected by others	Being asked a question in class	Travelling by plane	Spiders	Non-venomous snakes	Being in high places
Flying insects	Darkness	Cats	Speaking in public	Dirt	Making mistakes
Small dogs	Climbing up ladders	Being in water	Being late to an appointment	Large social gatherings	Being watched while you are working



Figure 8.4 An individual's phobia towards injections can be so intense and frightening that they avoid medical treatment.

SPECIFIC PHOBIA

As we learnt in chapter 6, a *specific phobia* (previously known as simple phobia) is an intense, irrational fear and avoidance of a particular object (such as needles, spiders or snakes), activity (such as swimming) or situation (such as enclosed spaces). People affected by phobias recognise that their fears are unreasonable and excessive, but they cannot control them. A phobia interferes with a person's ability to function normally in everyday situations. For example, someone with agoraphobia (fear of open spaces) finds it very difficult, if not impossible, to go to the movies or go shopping; someone who fears needles may avoid seeking medical treatment (see Figure 8.4). 'Videolink: Phobias and anxiety' gives an overview of phobias and other types of anxiety disorders.

VIDEO

Phobias and anxiety

anxiety

A feeling of apprehension, dread or uneasiness in response to an unclear or ambiguous threat

anxiety disorder

A mental disorder that involves feelings of extreme anxiety, accompanied by physical and psychological symptoms, which prevents a sufferer from normal functioning

Phobias can be classified according to the type of object or situation that is feared. The most common types are:

- animal type – fear of a specific type of animal such as a dog, spider or snake
- natural environment type – fear of things in the environment such as heights, storms, the ocean or caves
- blood/injection/injury type – fear of blood, injections, injuries and medical procedures
- situational type – fear of specific situations, such as flying in a plane, being in an elevator or in enclosed spaces.

Some of the common and more strange phobias are listed in ‘A closer look: Common and strange phobias’. Phobias can be associated with nearly any object or situation, so this is not a comprehensive list – it only begins to suggest the possibilities of all the different types of phobias people can experience.

Almost everyone has a few mild fears: fears of heights, enclosed spaces or insects are common. A phobic disorder differs from such common fears in that it produces overwhelming anxiety, producing symptoms including vomiting/nausea, shaking, fainting, sweating uncontrollably, increased heart rate and hot flushes. For a phobic disorder to exist, the fear experienced must fit certain criteria, such as being uncontrollable and disrupting the phobic person’s daily life (see Figure 8.5). Phobic persons are so threatened that they will go to almost any length to avoid the feared object or situation, even if they cannot necessarily explain the reason for their fear. Approximately 11 per cent of all adults have phobic disorders during their lifetime (Magee, Eaton & Wittchen, 1996).

What causes phobias? There is no single cause of phobias, but people often ‘learn’ to be afraid of particular objects – this was the case with Little Albert, discussed in chapter 6. Some people develop a fear even if they have *not* experienced a dangerous situation, or when they have simply perceived a situation to be dangerous when there was no real threat. Below is an account from a person who was diagnosed with a phobia of snakes, describing the development of their fear response.

F When I was about 3 years old, I watched a documentary about Australian snakes on TV. That night I had a nightmare. I dreamt that a snake was in the bottom of my bed. I woke up screaming and crying, still believing a snake was in my bed. From that day on I have not been able to watch a snake on TV, look at a photo of a snake in a book, or walk through ankle-length grass in the summer without experiencing intense anxiety. **J**

Many factors lead to the development of a phobic disorder, and no single factor can determine whether someone will experience phobic anxiety. The experience of a phobia can be explained through the biopsychosocial approach to understanding and treating mental disorders.

Checklist: specific phobia

- Intense fear ✓
- Irrational fear ✓
- Avoids fear object, activity or situation ✓
- Cannot control fear ✓
- Fear interrupts daily functioning ✓
- Overwhelming anxiety ✓

Figure 8.5 A fear must fit certain criteria to be diagnosed as a specific phobia.

A CLOSER LOOK

Common and strange phobias

Acrophobia: Fear of heights

Arachnophobia: Fear of spiders

Astraphobia: Fear of storms, thunder and lightning

Autophobia: Fear of oneself

Aviophobia: Fear of planes

Claustrophobia: Fear of closed spaces

Dentalphobia: Fear of dentists

Ergasiophobia: Fear of work

Hematophobia: Fear of blood

Hippopotomonstrosesquipedaliophobia: Fear of long words

Microphobia: Fear of germs

Nyctophobia: Fear of darkness

Pantophobia: Fear of everything

Pyrophobia: Fear of fire

Rachibutyrophobia: Fear of peanut butter sticking to the roof of the mouth

Sitophobia: Fear of food

Taphephobia: Fear of being buried alive

Triskaidekaphobia: Fear of the number thirteen

Xenophobia: Fear of strangers

Zoophobia: Fear of animals

CHECK YOUR UNDERSTANDING 8.1

- 1 Which of the following perspectives is not considered under the biopsychosocial explanation of mental illness?
 - A Perceptual factors
 - B Psychological factors
 - C Social factors
 - D Biological factors
- 2 The name of the technique that is used to facilitate positive changes in personality, behaviour and adjustment is known as _____.
- 3 Which of these symptoms are commonly experienced by people suffering from anxiety disorders?
 - A Feelings of insecurity
 - B Happiness
 - C Decreased heart rate
 - D Difficulty breathing
 - E Feelings of dread
 - F Feeling out of control
 - G Apprehension
- 4 What percentage of the population suffers from an anxiety disorder?
 - A 1 per cent
 - B 7 per cent
 - C 20 per cent
 - D 50 per cent
- 5 One anxiety disorder that is characterised by irrational and persistent fear and avoidance of a certain object, situation or experience is known as a _____.

BIOLOGICAL CONTRIBUTING FACTORS

The medical model attempts to explain mental disorders based on biological and genetic factors. These biological factors include the impact of neurotransmitters, heredity and physical health. Emerging evidence about the stress response and the role of the neurotransmitter gamma amino butyric acid (GABA) has contributed greatly to our understanding and management of phobic anxiety.

Role of the stress response

The experience of stress results in activation of the sympathetic nervous system. This leads to the occurrence of several physiological events, including increased heart rate, blood pressure and respiration. Research has shown that the autonomic nervous systems of people with a phobic disorder show increased stress-reaction responses – sufferers adapt slowly to repeated stressors and respond excessively even to simple stimuli that would not provoke anxiety in many other people. When these symptoms present,

it can lead to considerable disability such as avoiding usual activities (for example, going to work or shopping). These symptoms can be persistent and can have a highly detrimental effect on an individual's physical and mental health.

Learning to recognise the stress response can help sufferers gain control over it. For example, if you recognise that your breathing rate has increased, you can consciously try to slow it down, which can help the body return to homeostasis and decrease the feelings of dread associated with phobic anxiety. Active methods of reducing the stress response will aid the body's natural automatic system of reducing stress.

Role of the neurotransmitter GABA

As we learned in chapters 2 and 5, neurotransmitters are chemicals that are released into the synapse between neurons. They act as messengers that carry signals and information about stimuli (originating in the external world or in internal organs) to and from the brain.

There are several neurotransmitters known to be influential in anxiety disorders, including **gamma amino butyric acid (GABA)**, noradrenaline (also called norepinephrine) and serotonin. GABA is one of the neurotransmitters most strongly implicated.

When released, some neurotransmitters (such as adrenaline) have an *excitatory* effect, preparing the body to fight or flee (the fight-flight response); other neurotransmitters (such as GABA) have an *inhibiting* effect, and therefore calm or slow the body's response. Studies have shown that when GABA activates its receptors, the cells that have those receptors are inhibited, and the system becomes calm or slows down to counteract the excitability of the neurons (through the glutamate or noradrenergic system). This means that the specific features of the stress response – such as the increased heart rate, respiration or blood pressure – are blunted.

The treatment of phobic anxiety is closely related to the role of GABA and its effects on the body. Biological and psychological treatments often target the enhancement of GABA transmission, in order to inhibit the hyper and over-excited bodily responses seen in anxiety. A group of medications known as benzodiazepines can be used in the short-term treatment of phobic anxiety, because they enhance the GABA-induced inhibition of over-excited neurotransmitters (Lydiard, 2003).

Alcohol also has an inhibitory effect on GABA. When alcohol enters the brain, it binds to GABA receptors and inhibits the activity of neurons that have these receptors. This accounts for some of the sedative effects of alcohol, which can lead to a blunting of the features associated with the stress/

gamma amino butyric acid (GABA)

An inhibitive neurotransmitter linked with reducing and blunting the stress response

anxiety response. This may explain why some people believe they need alcohol to ‘calm down’ – however, reliance on alcohol to cope with anxiety is a maladaptive behaviour that can lead to the development of a substance use problem. Additionally, when the effect of alcohol wears off, all the anxiety-inducing problems will still exist and must still be faced.

Role of genetic factors

As we have learnt, genetic factors are inherited biological factors that can enhance (or reduce) an individual’s risk of, or vulnerability to, developing a particular condition. When a person is said to have a genetic risk, it means that the vulnerability or risk of developing a disorder (or a particular eye colour or hair colour) is built into the DNA (genetic sequence) of that person. This means that it has been inherited from their biological parents.

Specific phobias appear to have a familial tendency. Some studies suggest that up to 30 per cent of people with a phobic disorder may have a family history of someone closely related who has the same specific phobia, but specific research evidence is not yet available to confirm these suspicions (Sadock & Sadock, 2003). There is also evidence to suggest that people within the same family may end up having similar *types* of phobias (e.g. animal or environment-type phobias). Blood and injury type phobias have particularly strong familial patterns (American Psychiatric Association, 2000).

PSYCHOLOGICAL CONTRIBUTING FACTORS

The origin of a phobia is unique to every individual. During times of high emotion, the links we form with stimuli can in turn form powerful memories. An individual who suffers from a phobia pays more attention to threat information about that specific phobia; therefore, our psychological state can perpetuate a phobia as well as contribute to its development.

Psychologists understand that psychological and learning theories are important in the onset, persistence and management of phobic anxiety. Several prominent psychological models can be used to attempt to explain phobic anxiety.

Psychodynamic model

The psychodynamic model of psychology is a perspective that explains human behaviour by examining underlying forces and conflicts. It is particularly interested in the struggle between the conscious and unconscious mind.

Psychoanalyst Sigmund Freud, who founded the psychodynamic approach to psychology, conducted much work on anxiety. He hypothesised that the major role of anxiety in humans is to signal to

our attention that an unacceptable, unconscious thought is attempting to rise up to the surface, into our conscious awareness. He suggested that the anxiety we consciously experience indicates the surfacing of an unresolved conflict that we have attempted to bury in our unconscious mind. That is, when a distressing or threatening thought is signalled, we immediately feel the symptoms of anxiety.

According to Freud, we bring psychological defences into play in order to deal with these conflicts. The defence mechanism of *repression* (which we examined in chapter 4), among others, assists us to eliminate the anxiety – that is, it helps us put the anxiety-causing thought back into our unconscious so that we are no longer aware of that thought and can get on with our lives.

Freud’s psychodynamic model attributes the development of a phobia to a failure of the defence mechanisms. For example, the model proposes that a young child has a sexual attraction to their opposite-sex parent and is jealous of their same-sex parent during their psychosexual development. If the child is unable to repress these feelings, this internal jealousy will not surface as hatred for their same-sex parent – instead, the child will begin to hate and fear a phobic item, as this is a more acceptable object at which to direct their feelings.

A psychodynamic treatment of phobic anxiety would therefore involve therapy that would address the defence mechanism of repression. It would examine the actual source of the internal conflict and the patient would learn to repress it, meaning there would no longer be any need for the phobia as the projected source of the conflict.

Cognitive model

The cognitive model of psychology is a perspective that is interested in investigating internal mental processes, thoughts and memories.

Our cognitions are the psychological result of perception, learning and reasoning. We attempt to correctly perceive things so that our understanding of a particular issue or situation is helpful in our everyday functioning. However, we may sometimes pair faulty reasoning and rationale with fearful stimuli from the environment; hence, a new, faulty cognition is formed. For example, if you faint when you are having a blood sample taken, you may etch that experience wrongly in your memory as, ‘Oh, no! Needles are dangerous and drawing blood is frightening – I must keep away from needles and blood’. This can develop into a phobia where you experience a panic attack at the sight of blood or a needle, or simply at the thought of a blood sample being drawn from you. Part of the treatment of the phobic illness therefore revolves around ‘correcting’ these faulty cognitions.

Behavioural model

The behavioural model of psychology is a perspective that explains human behaviour through studying observable actions. The behavioural model proposes that phobic anxiety could be the result of learning; in particular, classical conditioning and modelling.

The consistent pairing of a neutral stimulus to an unpleasant stimulus, as is evident in classical conditioning, can cause phobic reactions. This is seen in the case of Little Albert. Little Albert's phobia of white fluffy objects was presumably the result of pairing the white fluffy rat (neutral stimulus) with an unpleasant stimulus (the loud noise).

Learning by modelling can also maintain the association between an object and the emotions that a person experiences. This may occur by observing a reaction in other people (for example, when children start crying when they see another child cry after receiving an injection) or by being taught or warned about particular objects (for example, being warned about the serious consequences of speeding by way of television advertisements) (Sadock & Sadock, 2003).

The treatment approach using the behavioural model would therefore use learning and behavioural strategies to 'unpair' the conditioned behaviours, or 'unlearn' what one has been taught by way of modelling. New, helpful behaviours would then be taught to the patient through cognitive and behavioural therapy.

It goes without saying that having one psychological factor or another does not necessarily mean that someone will develop a phobic disorder. Individual personality factors as well as strengths and weaknesses come into play in order for someone to eventually develop this disorder. It is also possible, then, to see that any treatments for phobic anxiety would need to use all three psychological models, in order to address all the contributing factors.

TREATING PHOBIA USING PSYCHOTHERAPIES

The use of medications has not entirely solved the problem of phobic anxiety. Evidence accumulated around the world now clearly shows that psychotherapies are as effective, if not more effective, than medications alone. Medications also have several side effects, whereas psychotherapies do not.

Cognitive behavioural therapy

Education is often the first step in the management of any disorder, and access to quality information is often very important in helping to reduce our fears about what we are dealing with. Professional education about psychological issues is called **psychoeducation**. As we saw previously, cognition is the psychological result of perception, learning and reasoning. Therefore, education about the disorder and how to deal with it is an important part of the treatment.



Figure 8.6 Destructive, maladaptive behaviours – such as drinking, smoking and avoiding work – can be changed by using cognitive behavioural therapy, which teaches a person new, healthier ways to cope with their stress.

Cognitive behavioural therapy (CBT) involves the application of learning principles to change thought processes and human behaviour, especially maladaptive behaviour (see Figure 8.6). Using knowledge and information to correct faulty cognitions forms the 'cognitive' part of CBT. Once we have the necessary knowledge and information, we then proceed to the 'behaviour' part of CBT. This part of the treatment involves modifying the unhelpful behaviours (such as avoidance) that have developed as a result of the faulty cognitions.

The purpose of CBT in treating phobia is to try to make the feared stimulus extinct in the absence of the feared consequences (Andrews, 2003). A client is gradually 'exposed' to higher doses of the feared stimulus, until they can bear the feared stimulus without the consequence (that is, without the anxiety). When this is achieved, the feared stimuli is said to have become extinct and is no longer capable of producing a fear response in the client.

VIDEO

Cognitive behavioural therapy

'Videolink: Cognitive behavioural therapy' examines a case where CBT may be used as a treatment option.

psychoeducation

Professional education and the provision of information about psychological issues

cognitive behavioural therapy (CBT)

The application of learning principles to change thought processes and human behaviour, especially maladaptive behaviour

Graduated exposure/systematic desensitisation

As discussed in chapter 6, graduated exposure and systematic desensitisation are the same – in this chapter we will use the term *systematic desensitisation*.

As we have learnt, systematic desensitisation is a technique that teaches sufferers to associate their feared stimulus with relaxation and feelings of being calm. In this procedure, a relaxation technique is used to reduce the anxiety. Systematic desensitisation is based on *reciprocal inhibition*, a term coined by Joseph Wolpe (Wolpe & Plaud, 1997). In reciprocal inhibition, one emotional state is used to block another. That is, it is impossible to be anxious and relaxed at the same time.

With repeated pairing of relaxation and the phobic stimulus, the stimulus loses its power to provoke anxiety. Systematic desensitisation can be used in a real setting (where the phobic stimulus is actually presented) or in an imagined setting (where the phobic stimulus is recalled using imagination), or in a combination of both.

This process takes a long time and relies on exposing sufferers gradually to the feared stimulus using a methodical step-by-step approach. For example, a person with a phobia of spiders would be exposed

to stimuli that are progressively more threatening – perhaps a picture of a spider, then a toy spider, then a dead spider, and finally a live one (see Figure 8.7). At the same time the person tries to keep themselves calm and relaxed, adapting to each situation in turn. They may do this by trying to regulate their heart rate or breathing rate. ‘A closer look: Systematic desensitisation’ examines this process in more detail.

Note, however, that all phobias are different, so individual treatment plans need to be designed by qualified psychologists. For many fears, systematic desensitisation works best when people are directly exposed to the stimuli and situations they fear (Menzies & Clarke, 1993). For something like a simple spider phobia, this exposure can even be done in groups (Ost, 1996). Also, for some fears (such as fear of riding an elevator) desensitisation may be completed in a single session (Sturges & Sturges, 1998). However, often desensitisation treatment takes months to eliminate fear of the stimulus. ‘A closer look: Systematic desensitisation’ discusses using the process of systematic desensitisation to treat phobias. ‘Videolink: Systematic desensitisation’ shows an interview with a psychologist who explains the benefits of using graduated exposure/systematic desensitisation to treat phobias.

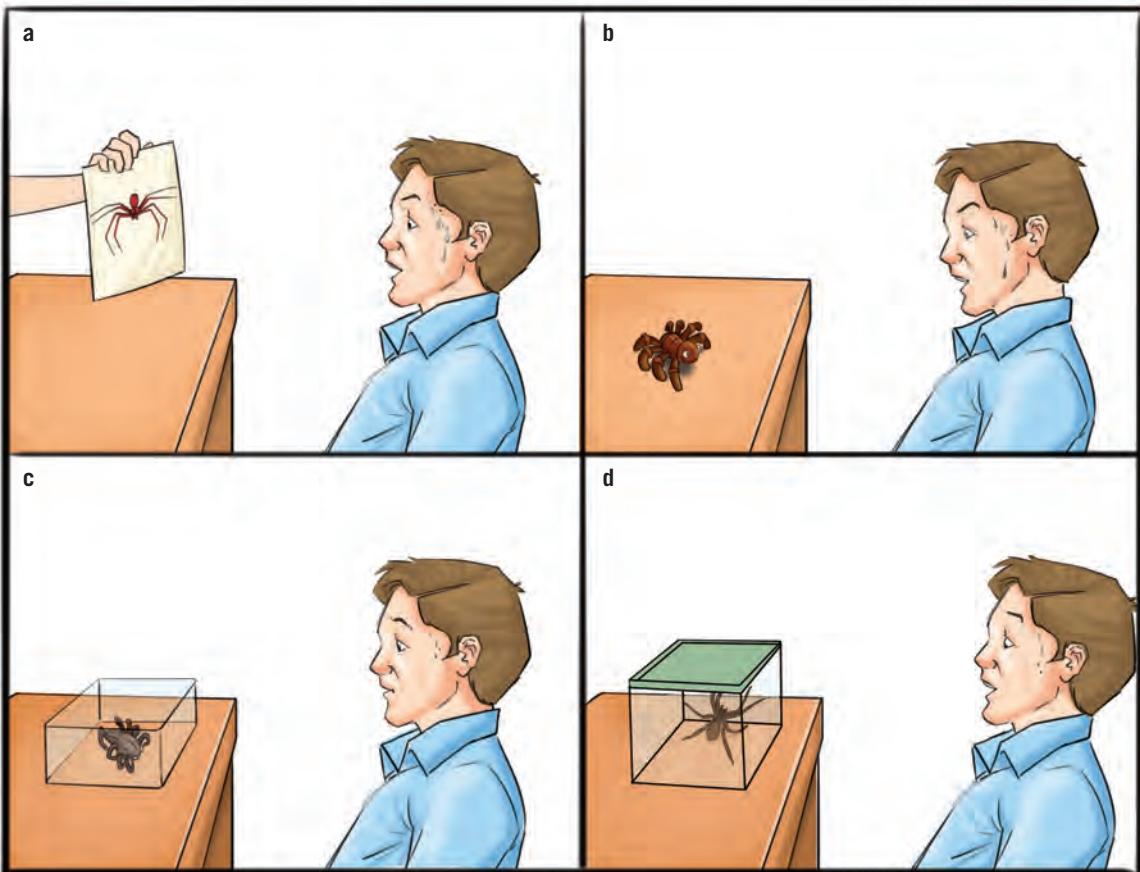


Figure 8.7 A person with a phobia of spiders is exposed to stimuli that are progressively more threatening. (a) The person is shown a picture of a spider; (b) The person is presented with a toy spider; (c) The person is presented with a dead spider in a glass case; (d) The person is presented with a live spider in a glass case. These progressions occur over a long period of time.

Systematic desensitisation

There are three steps in using the systematic desensitisation technique to alleviate a phobia in treatment.

Step 1

Identifying a relaxation technique is the first step. Any relaxation technique can be used, so the one that best suits the client should be chosen.

Step 2

An 'anxiety hierarchy' is created. The client is encouraged to think of 10 to 15 situations that relate to their phobia. For example, if the phobic event is flying in a plane, then situations relating to this event include making reservations, packing luggage, going to the airport, boarding the plane, taking off, landing etc. Each of these situations is put on a separate index card. The activities are rated by giving each one a score out of 100. Zero represents no anxiety or complete relaxation, and 100 represents the highest level of anxiety imaginable.

For example:

81 turbulence	69 landing
66 taking off	55 boarding the plane
50 checking in	41 driving to the airport
34 packing luggage	20 making reservations

Step 3

The overall goal of systematic desensitisation is to reduce the anxiety experienced in certain situations. This is accomplished by confronting each item of the anxiety hierarchy while the client is in a state of deep relaxation.

Clients and their therapists often work through the following stages to treat the client's phobia.

- 1 Induce relaxation using the preferred relaxation technique.
- 2 Read out the item that is lowest on the hierarchy established in Step 2 (the first session will begin with the lowest item and then progress upwards; subsequent sessions will involve the last item from the previous session).
- 3 Imagine oneself in the situation for 10 to 30 seconds.
- 4 Stop imagining the situation and determine the level of anxiety that one is experiencing (on the 0–100 scale).
- 5 Re-establish the relaxation again and relax completely for 30 seconds.
- 6 Re-read the item from the card. Again, imagine oneself in the scene for 10 to 30 seconds.
- 7 Stop and again determine the level of anxiety. If any anxiety is experienced, return to 6. If no anxiety is felt, move on to 8.
- 8 Move on to the next item of one's hierarchy. Repeat the above procedure for this item, beginning at 1.

If the client uses a schedule of two sessions per week, they will complete the desensitisation plan in three or four weeks. Using a schedule of five sessions per week, they will complete the desensitisation plan in one or two weeks.

Flooding

While systematic desensitisation is at one end of the spectrum where the client is exposed to the feared stimuli in a gradual fashion, flooding is at the other end of the spectrum. As we learnt in Chapter 6, flooding involves exposing a phobic person to the real feared stimulus all at once, usually with a buffer of a relaxation response to fall back on, and often in the presence of the therapist. This exposure is continued until the anxiety response disappears. If you had a fear of snakes, for example, your therapist may take you to the zoo on a therapy session, where the snake handler 'helps' you hold and touch a snake.

Imaginal flooding or *implosion* is a variant of flooding where the exposure is attempted in the imagination of the client rather than in a real-life situation. In this case, the therapist will describe the fearful situation in graphic detail, perhaps even with the use of pictures (see Figure 8.8), while the client attempts to gain awareness of the components of their stress response such as heart rate, sweating, respiration etc. This technique can be used if there is an element of actual, not just perceived, danger involved in exposure to the feared stimulus.



Figure 8.8 A behaviour therapist working with a client who has a phobia of snakes might use a photograph like this as part of an intense session of imaginal flooding.

SOCIOCULTURAL CONTRIBUTING FACTORS

Although specific phobic anxiety may be due to a particular object or situation, the content and origin of phobias has been found to vary from culture to culture and society to society, as well as ethnicity (American Psychiatric Association, 2000).

reciprocal inhibition

The concept that one emotional state is used to block another, as is the case in graduated exposure/systematic desensitisation

Australia has a very large migrant population – as many as 25 per cent of Australians were born overseas – so it is important to remember that the loves and hates, fears and victories and trials and tribulations of migrants while making their lives in Australia will all be affected by where they came from. The same is true of their phobias.

Age and gender also play a role in the development of phobias. Phobias are usually more common in children than in adults, but as children mature, many of these fears disappear naturally. Overall, women have a higher rate of phobias in comparison to men by a ratio of 2:1.

In terms of socio-cultural contributing factors, the two main causes of development of phobia are believed to be environmental triggers and parental modelling.

Specific environmental triggers

Several factors in the environment can predispose an individual to the development of specific phobias. Traumatic events – for example, being attacked by a dog or being trapped in a closet – can result in the development of a phobic reaction, but phobic reaction can also result from having unexpected anxiety attacks in situations that are *perceived* to be threatening.

Albert Bandura (1977) formulated the social learning theory, aspects of which are helpful in understanding how certain responses are learned in the social context, where the trauma of unexpected incidents becomes paired with a fear response or anxiety attack. Consider the example of a child who pats a neighbour's dog that appears docile,



Figure 8.9 Being frightened by a dog as a child may lead to a phobia towards all dogs later in life.

but that dog unexpectedly attacks (see Figure 8.9). The trauma of this unexpected incident may become paired with the fear response and the child may develop an irrational belief that *all* dogs are dangerous and unworthy of affection.

Parental modelling and transmission of threat information

Parental modelling and information transfer, or the transmission of threat information, are often related to each other. When Bandura questioned the usefulness of conditioned learning theories in understanding human behaviour, he used the social learning theory to drive home his point that many of the learnt behaviours cannot simply be explained by classical or operant conditioning, because they are unique. For example, if Jamila and Sarah were both bitten by dogs as children, but Jamila develops a phobia towards dogs while Sarah does not, this defies the notion that classical and operant conditioning alone are a cause for anxiety disorders.

As we learnt in chapter 6, Bandura studied observational learning/modelling in children and adults. As a conclusion, Bandura argued that children learn from their parents/elders and often mirror what their parents/elders do, including how to respond to stress and other difficulties. Bandura believed that the information transfer from generation to generation is a key principle in modelling behaviour. So, if a particular situation or object is perceived and appraised by the parents as a threat to survival and this information is conveyed to the children (either verbally or through actions), the children learn to respond to it in a similar way (see Figure 8.10).

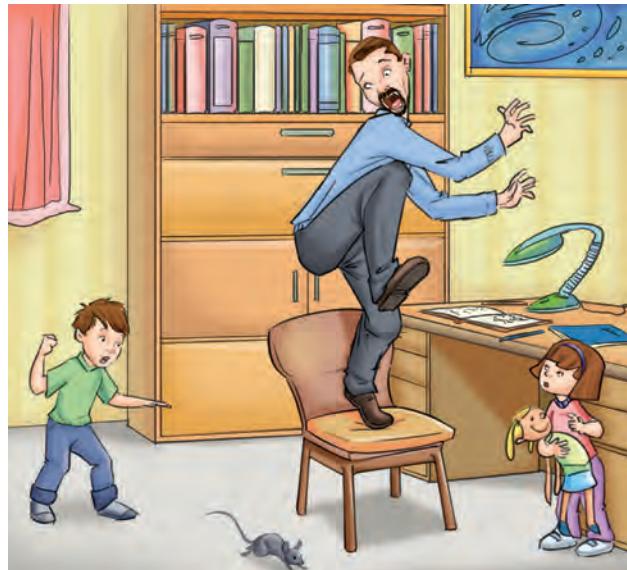


Figure 8.10 Children can learn fear responses by watching the excessive fear reaction of others to relatively harmless objects, events or situations.

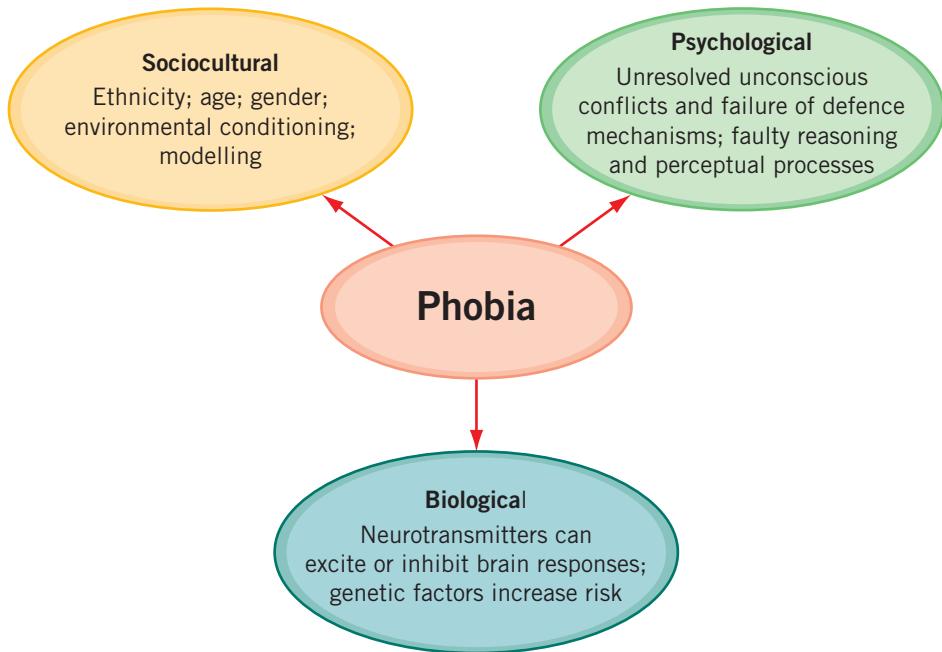


Figure 8.11 Phobias are the result of the interaction between behavioural, psychological, cognitive, biological and sociocultural factors.

A BIOPSYCHOSOCIAL UNDERSTANDING OF PHOBIC ANXIETY, ITS CAUSES AND ITS TREATMENT

The phobic disorders epitomise how the interaction of biological, psychological and sociocultural factors can result in an anxiety disorder (see Figure 8.11). The biopsychosocial framework suggests that biological factors such as the autonomic nervous system's (ANS) response to a perceived threat, the impact of neurotransmitters, and a person's physical health state contribute to the development of anxiety disorders such as phobia. In addition, genetic factors, or inherited biological factors, predispose some individuals to develop and sustain an anxiety disorder. Medications targeted to increase the release of specific inhibitory neurotransmitters may help a person regulate their ANS activity and manage their disorder more effectively, but sufferers also need to learn to recognise and control their stress response so the ANS can naturally reduce the effects of the sympathetic nervous system.

The biopsychosocial approach suggests that psychological factors (for example, unresolved unconscious conflict) also contribute to anxiety disorders such as phobias. Management involves therapy that focuses on identifying the cause of the conflict and learning to repress it. This approach also considers the role that learning plays in anxiety disorders. If we learn a faulty association between two or more stimuli, or we learn a phobic reaction by observing the reaction of others to specific stimuli, we may develop an anxiety disorder. Treatments such as cognitive behavioural therapy, systematic desensitisation and flooding focus on using learning to

extinguish the stress response to the specific stimulus and replacing it with a non-stressful response.

This model also focuses on the nature of communication between parents or caregivers and children, which, in turn, is dependent on the societal norms that are learnt and how they are learnt. Social factors – such as the type of culture a person is raised in, the social experiences they have and the style of parenting they experience – are also considered to contribute to a learnt response that results in an incorrect appraisal of a situation as threatening.

CHECK YOUR UNDERSTANDING 8.2

- Indicate whether it is true (T) or false (F) that the following biological responses occur in the experience of the stress response.
 - Heart rate increases
 - Respiration increases
 - Digestion increases
 - Muscle tension decreases
 - Perspiration decreases
 - Adrenaline increases
- What is the name of the neurotransmitter that inhibits the stress response?
 - Serotonin
 - Adrenaline
 - Noradrenaline
 - Gamma amino butyric acid
- Freud's theory that contributed to the explanation of phobic anxiety is known as the _____ approach.

- 4 Which of the following treatments is not a behavioural treatment for relieving the symptoms of phobic anxiety?
- Systematic desensitisation
 - Flooding
 - Medication
 - Cognitive behavioural therapy
- 5 Factors such as environmental triggers and parental modelling explain the development of a phobia according to _____ factors.



Mood disorder: Major depression

Psychologists have come to realise that **mood disorders** are among the most serious disorders of all. This is largely attributed to the fact that mood disorders are one of the most common types of disorders in our society. Mood disorders are defined as a group of mental disorders that involve major disturbances in emotion (mood), such as depression or mania.

There are two general types of mood disorders: depressive disorders and bipolar disorders. In this section we will examine the symptoms, prevalence, causes and prognosis of major depressive disorder, but you can read more about bipolar disorder in 'A closer look: Bipolar disorder'.

It is normal for depression to follow events such as disappointment, loss, a setback or the death of a loved one; depression and feeling sad is a normal part of the grieving process. So how are depressive mood disorders different from milder feelings of depression? Sometimes, depressive types of mood disorder follow a specific event; however, these reactive depressions last longer and are more severe than the event would seem to warrant (Gorman, 1996). In this case, people get stuck in the grief process and are unable to accept their loss. But depressive mood disorders can also appear for no obvious reason – they can have a life of their own.

Major depression is a mood disorder marked by lasting and extreme low emotions. For the person with major depression, everything looks bleak and hopeless, and their suffering is intense. Symptoms include feelings of hopelessness and worthlessness, loss of appetite, difficulty sleeping, withdrawal from social relationships, difficulties in concentrating, diminished interest in pleasurable activities or general everyday activities, neglect of appearance and lack of energy and motivation (see Figure 8.12). The person becomes extremely subdued or withdrawn, and may be suicidal. Depressive reactions pose a serious threat to survival. Suicide attempted during a major depression is rarely a simple 'cry for help' – usually, the person intends to succeed and may give no prior warning.

Figure 8.12 People with major depression experience intense negative emotions and feelings of total despair. Their depression causes them to be extremely subdued and withdrawn.

How prevalent is major depression? In Australia, about 26 per cent of people admitted to psychiatric wards in hospitals suffer from major mood disorders (AIHW, 2008). Studies have found that 5–12 per cent of men and 15–25 per cent of women will *at some time in their lives* experience major depression (Blazer, 2000). These figures reveal the lifetime *risk* of experiencing the disorder, but definitive (actual) figures also show a higher rate of depression in women than in men. The 2007 Australian Bureau of Statistics National Survey of Mental Health and Wellbeing found that 8–10 per cent of men and 15 per cent of women surveyed had suffered major depression at some stage in their lives. The key causes of depression in women were problems with relationships, loneliness, financial problems or stress (Australian Bureau of Statistics, 2007) (see Figure 8.13). Many of these women cope with

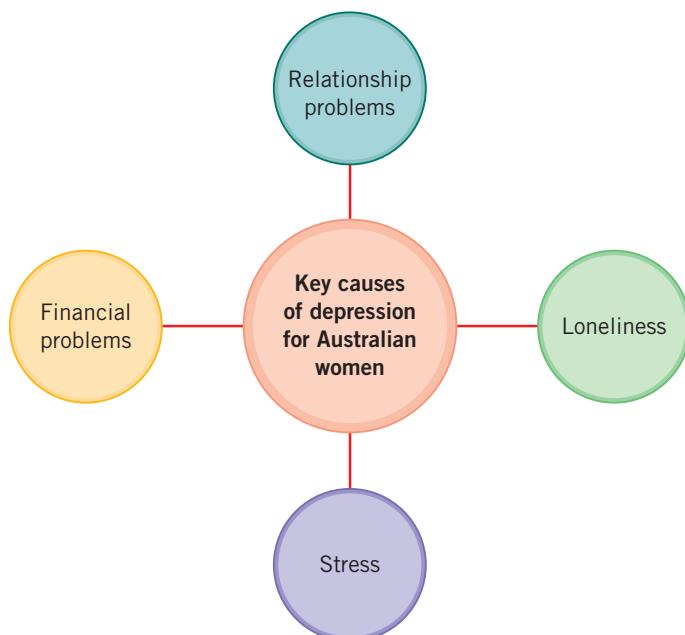


Figure 8.13 The key causes of depression in Australian women are relationship problems, loneliness, financial problems and stress.

depression on their own and do not receive adequate treatment.

Authorities believe that social and environmental conditions are the main reasons that more women than men suffer from depression. Factors that contribute to women's greater risk of depression include reproductive stresses, conflicts between work and parenting, and the strain of providing emotional support for others. Marital troubles, sexual and physical abuse, and poverty are also factors (Russo, 1990).



View 'Videolink: Major depression' to see an overview of major depression and an interview with a sufferer of the disorder.

Bipolar disorder

A CLOSER LOOK

Bipolar disorder is a mood disorder that causes extreme mood swings between mania (elevated mood) and depression, typically separated by days or weeks of normal moods. The disorder may cause recurrent episodes of mania and depression or only one episode.

When the bipolar sufferer is manic, they will typically be full of energy, with thoughts and feelings racing. They may talk loudly, function on minimal sleep, lack inhibitions, take extreme risks and lose their temper easily. People going through a manic episode can find themselves in trouble because they can engage in promiscuous sex, excessive alcohol and drug consumption, and expensive shopping sprees.

When the bipolar sufferer is depressed, their symptoms are very similar to those of major depression. Symptoms

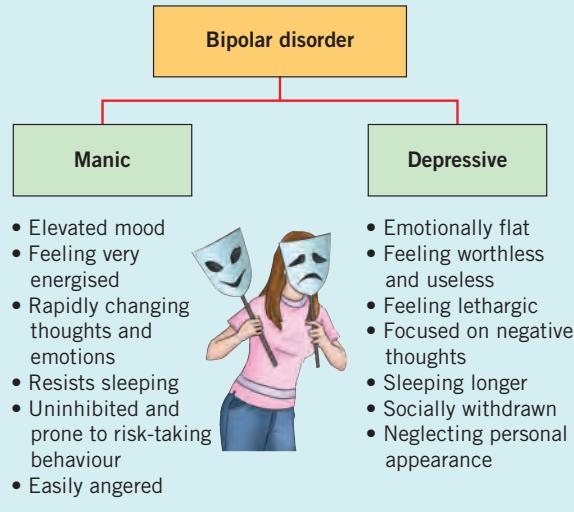


Figure 8.14 Bipolar disorder is characterised by extreme mood swings between mania and depression.

include feeling sad, worthless and helpless, and the person withdraws from social relationships, has difficulty concentrating and a diminished interest in pleasurable activities. The person may neglect his or her hygiene and appearance, and will have decreased energy and motivation.

How common is bipolar disorder? Bipolar disorder is much less common than major depression and is usually experienced before individuals reach the age of 30. It is believed by researchers that just over one per cent of the Australian population is diagnosed with bipolar disorder in a lifetime. Unlike major depression, bipolar disorder occurs equally in males and females, and it is more likely than major depression to run in families. This suggests that genetic factors may be involved in bipolar disorder (Blazer, 2000).

Many celebrities have disclosed their own battles with depression and bipolar depression to help others and to break down the stigma associated with such illnesses. Some of the well-known people who are thought to have suffered depression or bipolar disorder are (Internet Mental Health, 2009):

Carrie Fisher	John Cleese	Linda Hamilton
Charles Dickens	Vivien Leigh	Virginia Woolf
Kurt Cobain	Jean-Claude van Damme	Vincent van Gogh
(Figure 8.15)	Abraham Lincoln	John Nash
Spike Milligan	'Buzz' Aldrin	Michelangelo
Garry McDonald	Ludwig von Beethoven	
Cher		



Figure 8.15 Kurt Cobain, lead singer of rock group 'Nirvana' experienced a mood disorder. He committed suicide in 1994.

mood disorder

A mental disorder that involves major disturbances in emotion (mood), such as depression or mania

major depression

A mood disorder characterised by lasting and extreme low emotions, such as feelings of hopelessness and helplessness

BIOLOGICAL CONTRIBUTING FACTORS

Biomedical scientists and clinicians have attempted to explain the development of depression through a biomedical model – that is, by focusing predominantly on biological factors that may contribute to the disorder. Certainly, there are important biological factors at play in the experience of major depression. These include the neurotransmitters serotonin, noradrenaline and dopamine; as well as components of the neuroendocrine system, such as pathways involving the adrenal and thyroid glands; as well as growth hormones. Genetics also play a crucial part in development of this disorder.

Genetic predisposition and other genetic factors

Sensitivity to developing major depression can be under genetic control (Gabbard, 2005). Genetic studies such as family studies, adoption studies and linkage studies have shown a clear link between genetics and the development of mood disorders. A study from New Zealand recently found that genetic factors underpinning the serotonin action appeared to influence the effect of stressful life events on depression (Caspi et al., 2003). (We will examine serotonin next.) However, the direction of this relationship is not a simple straight line – it is quite complex. Hence, we should carefully and critically consider the statistics.

Studies have found that the first degree relatives (for example father, mother or siblings) of someone with a depressive illness are two to three times more likely to have a mood disorder themselves. As the degree of relationship widens, the risk decreases (Kelsoe, 2000). For example, a cousin of someone with major depression is less likely to be affected than a brother or sister. It is important to realise that an individual with a family member who has a major depressive disorder will not automatically develop the disorder themselves. Whether or not the disorder

develops is dependent on several psychosocial factors that we will investigate later in this chapter.

Role of neurotransmitters: Serotonin and noradrenaline

It is now believed that neurotransmitters such as serotonin and noradrenaline are implicated in contributing to the development of depression. Serotonin is involved with controlling appetite, sleep patterns, memory and mood – the more serotonin, the more elevated our mood. Noradrenaline is a neurotransmitter that is responsible for the body's reaction to stressful situations, such as the fight-flight response – as noradrenaline is released, the body becomes alert and prepared to cope with stressors. A lack of noradrenaline can lead to decreased motivation. People with depression have markedly low levels of both serotonin and noradrenaline, so this contributes to the belief that these neurotransmitters may be involved in the development of depression.

Management and treatment using antidepressant medication

Adding credence to the theory that major depression can be explained through the role of serotonin and noradrenaline, biomedical and pharmaceutical scientists have found that a number of medications that act on these neurotransmitters can alleviate depressive symptoms. They have also been found to lead to a complete recovery over time (usually three to 12 months). Serotonergic medications act on serotonin and noradrenergic medications act on noradrenaline – they are types of antidepressants. These medications increase the concentrations of serotonin and noradrenaline in the brain synapses and hence enhance neurotransmission (see Figure 8.16).

Some of the most famous examples of serotonergic medications are Fluoxetine (e.g. Prozac™) and

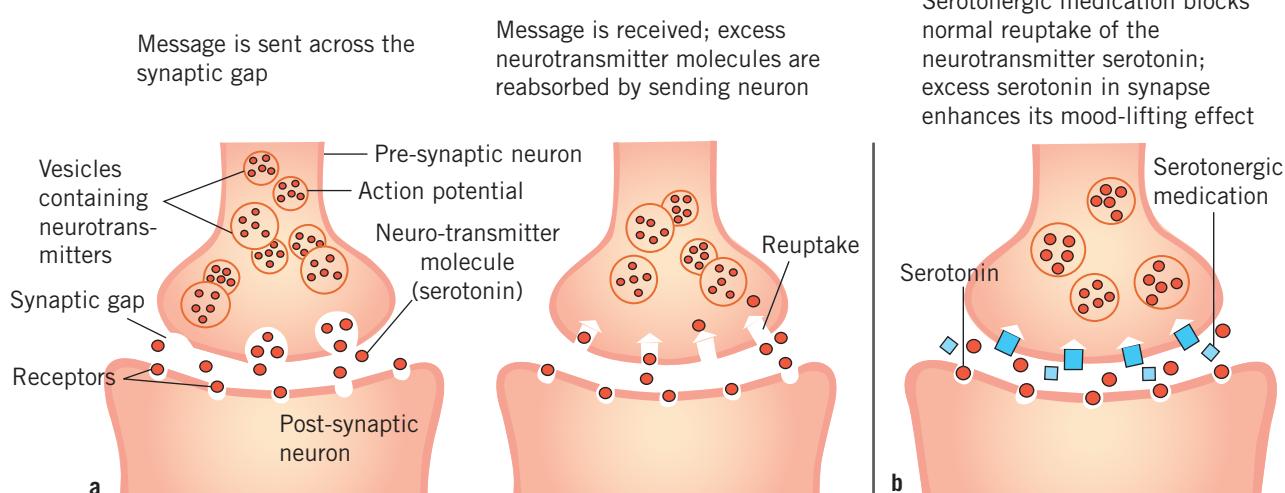


Figure 8.16 The biology of serotonergic antidepressants: When neurotransmitters are released by the pre-synaptic neuron into the synaptic gap, they travel to the post-synaptic neuron. Any excess neurotransmitters are 'taken back' or 'reabsorbed' into the pre-synaptic neuron in a process known as reuptake. The sequence shown in (a) depicts the normal reuptake of excess neurotransmitters, in this case, serotonin; (b) shows how serotonergic medication actively blocks the reuptake of serotonin, meaning that the excess serotonin remains in the synaptic gap, which has a mood-enhancing effect.

Sertraline (e.g. Zoloft™). An example of a noradrenergic medication is Venlafaxine (e.g. Effexor™). Usually a general practitioner or a psychiatrist would commence these medications after an initial assessment, and would review a person's response to these medications on a regular basis. It is important to note that these medications are all chemicals that are being introduced into the body and hence will have several side effects. We must also remember that not all types and severities of depression need to be treated by these medications.

PSYCHOLOGICAL CONTRIBUTING FACTORS

While we have established that there are some biological factors at work in the development of major depression, we must not discount the importance and role of other factors. How all these factors interact with each other is at the core of understanding the development of major depression.

Several theorists have attempted to formulate the causation of depression using psychological factors and it is now very well recognised that psychological factors have an important role to play in the causation of major depression.

Cognitive theory of depression

In the 1960s, Aaron Beck formulated a theory that proposes that major depression results from specific cognitive distortions present in people already prone to depression. These cognitive distortions are like cognitive 'looking glasses' through which a person perceives their internal and external worlds (Beck, 1985). Beck theorised that the 'cognitive triad' of depression is at the centre of the development of the disorder from the cognitive perspective. The cognitive triad involves a negative view of self, a negative and hostile perception of the world as a demanding place, and a negative expectation of suffering and failure in the future (see Figure 8.17). These views cannot be

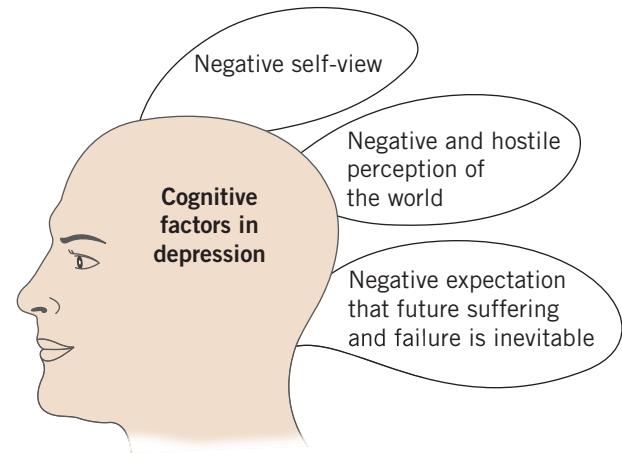


Figure 8.17 The cognitive distortions experienced by depression sufferers cannot be treated by medication, so CBT is used to modify the distortions.

treated through medication and, as such, CBT seeks to modify these distortions.

Learned helplessness

Martin Seligman, an American psychologist, connected depression to the experience of uncontrollable events. **Learned helplessness** is an acquired inability to overcome and avoid aversive stimuli or situations. This theory was formulated after several animal experiments involving dogs and the findings were then generalised to humans. See 'Focus on research: Learned helplessness' to learn more about Seligman's experiments.

serotonin

A neurotransmitter involved with appetite, sleep, learning, memory and mood

noradrenaline

A neurotransmitter that is responsible for the body's reaction to stressful situations

learned helplessness

An acquired inability to overcome and avoid aversive stimuli or situations

FOCUS ON RESEARCH

Learned helplessness

In early 1965, Martin E. P. Seligman and his colleagues were studying the relationship between fear and learning. While doing experiments on dogs using classical conditioning, they accidentally discovered an unexpected phenomenon.

In the experiments, Seligman conditioned dogs to have a response to the sound of a tone. During the acquisition phase, Seligman paired a harmless shock (which produced a fear response) with the sound of a tone while the dogs were restrained in a hammock apparatus. The dogs were conditioned to have a fear response to the tone, but on trying to escape they found that their restraints prevented them. They had no choice but to bear the fear response.

Following this, the conditioned dogs were individually put into a shuttlebox, which consisted of a low fence dividing the box into two compartments (see Figure 8.18). The dogs could easily see over the fence, and they were not restrained, so they could jump over the fence if they wished. When Seligman sounded the tone this time the dogs did not always attempt to escape – they only attempted to escape approximately 30 per cent of the time. Even when the harmless shock was delivered through the floor following the tone, the dogs still did not move.

Seligman then put unconditioned dogs (which had not previously experienced the shock) into the shuttlebox. These dogs, as expected, immediately jumped over the fence to the other side, to avoid the shock. This occurred approximately 95 per cent of the time.

Apparently, what the conditioned dogs learned during the acquisition phase (when they were restrained) was that trying to escape from the shocks was futile. The dogs learned to be helpless.

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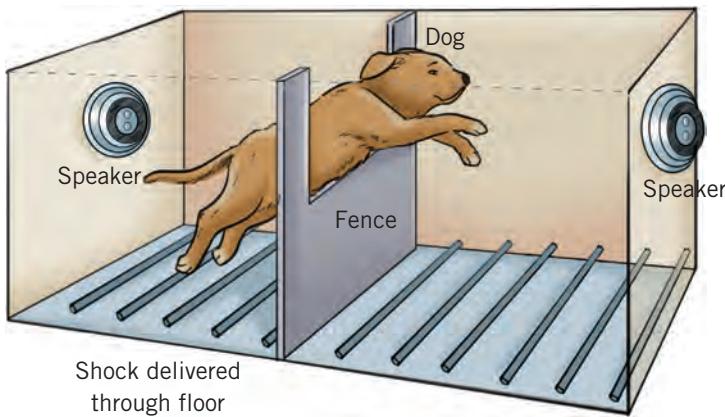


Figure 8.18 Seligman's shuttlebox used in the learned helplessness experiments

The theory of learned helplessness was then extended to human behaviour, providing a model for explaining depression: depressed people became that way because they learned to be helpless; they learned that whatever they did was futile. During the course of their lives, depressed people apparently learned that they have no control (Hsi Yen, 1998).

QUESTIONS

- 1 Which dogs are in the control group and which dogs are in the experimental group in this study?
- 2 What is the independent variable in this study?
- 3 What is the dependent variable in this study?

Helplessness is a psychological state that occurs when events appear to be uncontrollable (Seligman, 1989). Helplessness in humans is a common reaction to repeated failures and to unpredictable or unavoidable punishment. An example would be school students who feel helpless about their school work because they do not achieve high marks. Such students tend to procrastinate and give up easily (McKean, 1994).

Attributions have a large effect on feelings of helplessness. People who are made to feel helpless in one situation are more likely to act helpless in other situations if they attribute their failure to lasting, general factors. For example, after failing to solve a series of puzzles someone might make the generalised conclusion that 'I must be stupid'. In this situation they have attributed their failure to their general intelligence, rather than to the specific situation. Attributing failure to specific factors in the original situation – such as 'I am not very good at puzzles' or 'I wasn't really interested in doing the puzzles' – tends to prevent learned helplessness from spreading (Alloy et al., 1994; Anderson et al., 1984).

We internally process explanations as to the cause of difficult life experiences, and this can produce a loss of self-esteem if these processes involve self-blame or feelings of helplessness. Behavioural therapists believe that improvement of depression depends on the patient learning a sense of control and mastery over their environment (Sadock & Sadock, 2003).

Stress

There are several factors associated with stress that can cause depressive cognitions such as worthlessness,

helplessness and hopelessness. Although mild forms of depression may be normal during times of stress, major depression can result from excessive stress. In such situations, we may find that the person was unprepared to cope with the current stress, perhaps because of a series of previous disappointments. The triggering stressor is often the 'last straw' that reveals an underlying emotional disturbance.

As we know, if an individual has no sense of being able to control a situation, this can lead to feelings of helplessness. Therefore, appraisal of stressors can have an impact on whether an individual is able to gain mastery over them. In chapter 7 we learnt about the transactional model of coping with stress, which focuses on how a person interacts with their external environment. The model proposes that stress occurs after a person appraises a potential stressor and finds that their abilities and resources to cope with it are inadequate. If that stressor becomes overwhelming, the person feels helpless and may develop depression. When the depression sufferer experiences additional stressors, they would continue to appraise themselves as having no ability to cope.

A person's personality also has an impact on development of major depression. Although no single personality trait or type is believed to directly predispose a person to depression, it is now believed that people with co-existing obsessive-compulsive disorder, histrionic personality and borderline personality disorder may be at a higher risk for developing depression (Sadock & Sadock, 2003).

TREATING DEPRESSION USING PSYCHOTHERAPIES

As discussed earlier in this chapter, cognitive therapy helps clients change thinking patterns that lead to troublesome or maladaptive emotions or behaviours (Freeman & Reinecke, 1995). For example, changing a client's thoughts and beliefs about themselves can greatly reduce the incidence of them compulsively thinking of themselves as a no-good person (Jones & Menzies, 1998).

Cognitive behavioural therapy

CBT has been especially effective for treating depression. As you may recall, Aaron Beck believes that negative, self-defeating thoughts underlie depression. According to Beck, depressed people see themselves, the world and the future in negative terms (see Figure 8.19). Beck believes this occurs because of major distortions in thinking.

The first distortion is **selective perception**, which refers to perceiving only certain stimuli in a larger set of possibilities. If five good things happen during the day and two bad things happen, depressed people focus only on the bad. The second distortion of



Figure 8.19 Is the glass half empty or half full? Aaron Beck theorises that negative thoughts underlie major depression. Cognitive therapy helps people adopt new, positive thinking patterns.

thinking underlying depression is **overgeneralisation**, which is the tendency to let upsetting events affect unrelated situations; for example, considering yourself a *total* failure, or completely worthless in *all* aspects of life, if you were to lose a job or fail a test. To complete the picture, Beck says that the third cognitive distortion in depressed people is that they tend to magnify the importance of undesirable events – they engage in **all-or-nothing thinking**, by seeing each event as completely good or bad, right or wrong, successful or failed (Beck, 1985).

How do cognitive therapists alter such thought patterns? Cognitive therapists make a step-by-step effort to correct negative thoughts that lead to depression or similar problems. At first, clients are taught to recognise and keep track of their own thoughts. The client and therapist then look for ideas and beliefs that cause depression, anger and avoidance. For example, here's how a therapist might challenge all-or-nothing thinking (Burns & Persons, 1982):

Patient: I'm feeling even more depressed. No one wants to hire me, and I can't even clean up my apartment. I feel completely incompetent!

Therapist: I see. The fact that you are unemployed and have a messy apartment proves that you are completely incompetent?

Patient: Well ... I can see that doesn't add up.

Next, clients are asked to gather information to test their beliefs. For example, a depressed person might list his or her activities for a week. The list is then used to challenge all-or-nothing thoughts, such as 'I had a terrible week' or 'I'm a complete failure' – especially if the list contains positive activities or events. With more coaching, clients learn to alter their thoughts in ways that improve their moods, actions and relationships. This is coupled with changing negative behaviours that are associated with the experience of depression, such as not getting out of bed or failure to engage with others in a social setting.

Cognitive therapy is as effective as drugs for treating many cases of depression. More importantly, people who have adopted new thinking patterns are less likely to become depressed again – a benefit that drugs cannot impart (Fava et al., 1998; Gloaguen et al., 1998).

selective perception

Perceiving only certain (negative) stimuli among a larger set of possibilities

overgeneralisation

Blowing a single event out of proportion by extending it to a large number of unrelated situations

all-or-nothing thinking

Magnifying undesirable events or situations by classifying them as absolutely right or wrong, good or bad, acceptable or unacceptable and so on

In an alternative approach, cognitive therapists look for an absence of effective coping skills and thinking patterns, not for the presence of self-defeating thoughts (Freeman & Reinecke, 1995). The aim is to teach clients how to cope with anger, depression, shyness, stress and similar problems, and implement these with behavioural strategies to help them improve their coping skills.

Psychodynamic psychotherapy

Psychodynamic psychotherapy is based broadly on the principles of psychoanalysis, but draws from several schools. The psychodynamic psychotherapist is always interested in the meaning of the stressor or experience. Based on this theory, early traumas (such as abuse or loss of a parent) in childhood make a person more vulnerable to depression as an adult. John Bowlby (1969) believed that a child's attachment to his or her mother is necessary for survival. When this attachment is disrupted (either by parental separation or death), children view themselves as unlovable and in adult life such people may become depressed when they experience a loss, as it brings back feelings of being unloved (Gabbard, 2005). Depression is also believed to be caused by repressed anger about early life events. This anger is displaced and in adult life can be turned inward as self-blame and self-hatred (Isenberg & Schatzberg, 1976).

Psychodynamic psychotherapy is a psychological technique used to help a person understand the links between their childhood and their difficulties in adult life, as a way of understanding their depression. It helps facilitate changes in the depressed person's behaviour, adjustment to life and their view of themselves; from 'I am unlovable' to 'I am lovable, I am OK'.

SOCIOCULTURAL CONTRIBUTING FACTORS

Social and cultural factors cannot in themselves cause depression – as we learnt previously, they must interact with biological and psychological factors to cause illness. Nor do specific social factors determine who will become depressed and who will not; for example, not every person of low socioeconomic status is depressed, and not every rich person is happy. There are, however, certain risk and support factors that can contribute to the development of this disorder.

Risk factors: Abuse, poverty, social isolation and social stressors

Many studies have supported an increased risk of depression in people who have been physically, emotionally and/or sexually abused. One such study was conducted in Seattle, USA, involving 397 women who had reported abuse during a 14-month period

from 1997 to 1998. The women were monitored for symptoms of depression three months, nine months and two years after the initial report of abuse. They were also surveyed on subsequent incidences of physical, psychological and sexual abuse. Based on the study, it was found that as the violence decreased or stopped, the women's risk of depression also fell. It dropped 35 per cent when abuse ceased altogether and 27 per cent when physical or sexual abuse stopped but psychological abuse continued (Healthyplace, 2008).

Unemployment is also an important risk factor; some studies quote that unemployed people are three times more likely than employed people to report depressive symptoms (Sadock & Sadock, 2003). Unemployment and living in poverty can lead to a lack of connectedness to others and a sense of failure, both key factors in the development of depression. It has been found, however, that low socioeconomic status has no direct correlation with major depressive disorder.

Some international studies report that depression is more common in rural areas than urban areas; however, this is not so in Australia. In this country, there are no significant inter-regional differences in the prevalence of depression. However, males aged 45–64 years living in rural and remote areas are more likely to report depression than males of the same age living in major cities (AIHW, 2008).

International studies have reported that the prevalence of mood disorders does not differ between races, and this is demonstrated in Australia. The migrant population in Australia is no more at risk for the development of mood disorders than the native Australian population (AIHW, 2008). This is indeed a surprising result because, as we saw in chapter 7, acculturation can cause severe stress in some sections of the migrant population. Indeed, significant psychological stress has been observed in some migrant groups, such as humanitarian migrants from the Middle East and the Balkan states as well as those that do not speak English on arrival in Australia. We can therefore conclude that social isolation and the social stressors of adapting to a new culture can cause depression in some vulnerable individuals, but not necessarily all.

Some stressful life events appear to be particularly depression-inducing. The most powerful stressors appear to be the death of a loved one or a close relative, assault, serious marital problems and divorce or marital break-up. The life event that is strongly associated with the development of depression is the loss of a parent in childhood, before the age of 11.

Support factors: Family, social networks and recovery groups

There is research evidence to suggest that major depressive disorder occurs more often in people without close and confiding interpersonal relationships;



Figure 8.20 Experiencing a supportive family network decreases the risk of developing depression.

people who do not have a supportive family and are not part of a social network are at a higher risk of developing depression than people who have strong social connections. This could be seen as an extension of the role of social networks and support in dealing with stress. People with the depressive cognitions of poor self-esteem and worthlessness are less likely to go out and find company, because they already ‘know’ that they are not going to be liked or loved by their friends (a cognitive distortion). Families have a huge role in supporting each other during times of crises and in helping individuals cope with difficult and stressful life events (see Figure 8.20).

Recovery groups for the mentally unwell have been developed in many parts of Australia and around the world. These are generally staffed by volunteers who have themselves experienced a mental disorder. GROW is one such not-for-profit, non-governmental organisation aimed at helping a range of mental illnesses, particularly depression. Founded in Sydney in 1957, the non-professional setting is also non-threatening and intensely supportive. People who attend the support group are encouraged to share their problems and achieve a feeling of community and acknowledgement that they are not alone in facing the difficulties of their illness. Acceptance, anonymity and trust are other cornerstones of such groups (GROW, 2010). GROW now has groups in the United States of America, Ireland and New Zealand, among other countries.

A BIOPSYCHOSOCIAL UNDERSTANDING OF DEPRESSION, ITS CAUSES AND ITS TREATMENT

It is clear to see that none of the risk or predisposing factors are independent or act in isolation to cause depression. Genetic predispositions on their own cannot cause major depression; for a genetic risk to ultimately express itself as a disorder, a combination of stressful life events and other social and cultural factors must

interact to cause this to happen. Similarly, a stressful life event on its own cannot cause major depression; several other risk or predisposing factors must interact as well. Hence, we can see that a biopsychosocial framework must be applied in the understanding of the illness as well as its treatment.

Imagine that a person became depressed because in the space of three months they lost their job and their relationship broke up. If this person was prescribed antidepressants to treat the disorder, but the cognitions behind their depressive illness were not addressed, their recovery would likely be severely impeded. However, if their treating team consisted of a doctor and a psychologist, they could address the biopsychosocial needs of the person via an open-minded, multi-disciplinary approach; that is, they would address the medical, psychological and social needs of the individual. Social needs could be addressed by referral to appropriate agencies such as Centrelink or job recruitment agencies, and by the person’s family or friends ensuring that the person feels supported. The chances of recovery in this case, where all aspects of the illness are addressed, increase dramatically.

What is the prognosis for people suffering from major depression? Unfortunately, up to 15 per cent of people with major depression die by suicide. In 50 per cent of cases, people will only experience one major episode of depression in their lives. In approximately 35 per cent of cases, people learn to live with depressive symptoms and usually engage in some sort of treatment (DepNet International, 2009).

As we have learnt, good treatments are available for major depression. For mild and moderate forms of depression, there is strong evidence that CBT is very useful and can lead to full recovery. In severe forms, sometimes medications are required as well as hospitalisation. Electroconvulsive therapy (ECT) is another form of treatment used with people who are very unwell, and this is usually administered in a hospital setting. However, not everyone who is depressed needs CBT or medications; some people respond very well to counselling alone. Complete ‘Try it yourself 8.2’ to learn more about the individual nature of major depression.

TRY IT YOURSELF 8.2

Experiences of depression

Australian comedian and actor Garry McDonald – best known for his alter-ego Norman Gunston and his role of ‘Arthur’ in the television series *Mother and Son* – has spoken publicly about his experiences with depression and anxiety. Australian tennis legend Pat Cash, a former Wimbledon champion, has also revealed his own battles with depression. There are many other people who share their experiences of depression so that other sufferers can see they are not alone and are given a sense of hope for their own recovery. Sharing these experiences also helps to remove the stigma that is associated with mental illness.

Continued ▶

- 1 Go to the BeyondBlue website (www.beyondblue.org.au).
- 2 Read some personal experiences of people who have suffered depression.
- 3 How did these accounts make you feel? What sort of factors do you feel have contributed to their experiences of depression? What sort of things may have helped, or did ultimately help, these sufferers?
- 4 Discuss these ideas with your classmates.

CHECK YOUR UNDERSTANDING 8.3

- 1 What category of mental health disorders does major depression fall under?
 - A Anxiety disorders
 - B Mood disorders
 - C Psychotic disorders
 - D Bipolar disorders
- 2 It has been found that depression sufferers have excessively _____ levels of some neurotransmitters, such as serotonin.
- 3 Indicate whether these statements are true (T) or false (F).
 - a Women have a higher lifetime risk of developing major depression than males.
 - b If you have a relative that suffers from depression, you will too.
 - c A symptom of major depression is excessive sleeping.
 - d Depression sufferers have no neurotransmitters.
 - e Medications are not effective in the treatment of depression.
- 4 An acquired inability to overcome and avoid aversive stimuli or situations is known as _____.
- 5 During cognitive behavioural therapy, a psychologist seeks to eliminate thinking patterns that are maladaptive. When individuals perceive only certain stimuli in a larger array of possibilities, this is known as:
 - A selective perception.
 - B overgeneralisation.
 - C all-or-nothing thinking.
 - D tactical ignoring.

Addictive disorder: Pathological gambling

While reviewing the categories of mental disorders in chapter 7 (Table 7.4, page 224), were you surprised to learn that various ‘social issues’ – from illicit substance use to gambling – are considered psychological illnesses? Pathological gambling is part of the category of ‘Impulse-control disorders’ (American Psychiatric Association, 2000), but is also known as an **addictive disorder**. Gambling is a serious social problem sanctioned by many societies worldwide as a harmless pastime, but in reality it has significant costs to individuals, families, societies and workplaces. Gambling occurs in many domains – we can bet on many sports in person, online or over the phone; we can bet at card-game evenings; and we can bet on the pokies and gaming tables at casinos and in most hotels and pubs (see Figure 8.21).

Social gambling usually occurs with family and friends, and lasts for a limited period of time, with predetermined and acceptable losses (American Psychiatric Association, 2000). People often hide behind the notion that drinking and gambling are part of our wider Australian culture, yet what often begins as entertainment and pleasure can for some people change to become a serious issue. **Pathological gambling** occurs when gambling starts playing a big role in a person’s life and hurts them, their family, their friends and the people who care for them (Department of Justice, 2009). Pathological gambling is often characterised by a failure to resist the impulse to gamble despite severe and devastating personal, family and occupational consequences.

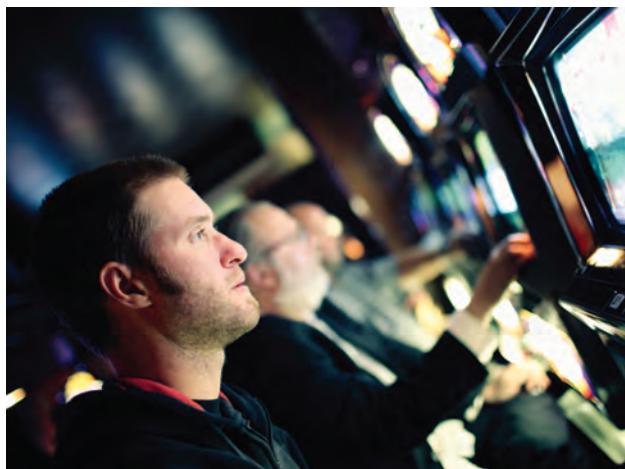


Figure 8.21 Gambling occurs in many domains; when people cannot resist the urge to gamble and ignore the financial and social consequences of potential losses, they suffer from an addictive mental disorder known as pathological gambling.

'A closer look: Signs that gambling may be pathological' provides a list of signs that gambling may be getting out of hand and becoming a pathological disorder. Table 8.1 shows the difference between gambling without problems and pathological gambling.

A CLOSER LOOK

Signs that gambling may be pathological

- Gambling to avoid dealing with personal problems or disappointments
- Skipping work or study to gamble
- Spending more time gambling than with family and friends
- Thinking about gambling every day
- Gambling to win money, not just for fun
- Gambling to win back money lost by gambling
- Feeling depressed because of gambling
- Lying or keeping secrets about gambling
- Borrowing money to gamble
- Arguing with family and friends about gambling
- Gambling for longer periods of time than originally planned
- Gambling until every dollar is gone
- Losing sleep due to thinking about gambling
- Using money on gambling that should be used to pay bills
- Trying to stop gambling, but being unable to
- Becoming moody when trying to stop or cut down on gambling
- Trying to increase the excitement of gambling by placing bigger bets
- Breaking the law to get money to gamble

Source: problemgambling.vic.au

Table 8.1 The differences in perceptions and behaviours: Gambling as a recreational activity vs moderate and severe problem gambling

NO GAMBLING PROBLEM	MODERATE GAMBLING PROBLEM	SEVERE GAMBLING PROBLEM
• Entertainment	• Guilt	• Depression
• Hobby	• Arguments	• Relationship breakdowns
• Social activity	• Secrecy	• Debt and poverty
• Pleasant surroundings	• Some depression	• Crime (theft)
	• High expenditures	• Chasing big losses
	• Anxiety	
	• Win back losses	

Source: www.problemgambling.vic.gov.au

Pathological gambling often begins in adolescence for men and late in life for women. This disorder tends to be a chronic problem and is seen to comprise four stages:

- 1 *The winning stage* – The first stage, where a big win hooks the person to gambling. (Interestingly, women often become hooked on gambling as an escape from problems rather than as a result of a big win.)
- 2 *The progressive-loss stage* – The person starts living around their gambling addiction and behaviours, and making concessions for their gambling behaviours.
- 3 *The desperate stage* – The person gambles in a frenzy, often with huge debts, and sometimes even indulges in criminal activities to obtain money in order to keep gambling.
- 4 *The hopeless stage* – The person develops the insight that the lost money can never be regained (Sadock & Sadock, 2003).

In the year 2005–06, the average Australian adult spent \$1000 at gambling venues! This results in a \$5–7 billion contribution to the economy, which is almost 0.5 per cent of Australia's gross domestic product (GDP) (ABS, 2009).

BIOLOGICAL CONTRIBUTING FACTORS

The role of neurotransmitters: Dopamine

Research is starting to show evidence that the regulation of neurotransmitters – particularly **dopamine**, but also serotonin and noradrenaline – is disrupted in pathological gamblers. Dopamine is a neurotransmitter that is involved with behaviour, cognition, voluntary movement, motivation, punishment and reward, among other functions.

Research indicates that pathological gambling is an addiction similar to a chemical addiction because of the changes it can create in neural pathways. The dopamine 'reward pathway' in the brain is believed to be linked to the drive for eating, love and

addictive disorder

A mental disorder that involves uncontrollable maladaptive behaviours or the use of substances, relationships or activities, and a failure to resist the impulse to engage in them, to the detriment of other responsibilities

social gambling

Gambling behaviour that occurs with family and friends and lasts for a limited period of time, with predetermined and acceptable losses

pathological gambling

A persistent and maladaptive gambling behaviour characterised by a failure to resist the impulse to gamble despite severe and devastating personal, family and occupational consequences

dopamine

A neurotransmitter that is involved with behaviour, cognition, voluntary movement, motivation, punishment and reward, among other functions

reproduction – the so-called critical survival actions of the human species. Fulfilment of these needs results in the release of dopamine in some parts of the brain, mainly the frontal lobes. But researchers have found that dopamine is also released and pleasure sensations also produced when a person indulges in activities that are not crucial for survival, such as pathological gambling, the use of alcohol, or other illicit substances.

The combination of dopamine with noradrenaline and serotonin produces a ‘rush’ or a ‘high’ that arouses the brain’s pleasure centres, and this combination is so rewarding that many social gamblers often run a very high risk of becoming compulsive and pathological gamblers. The person in question becomes so used to this pleasure that when the activity is withdrawn, they start craving the rewards of the activity, leading to all the attendant psychosocial and behavioural problems associated with pathological gambling. Brain imaging studies have recently shown that pathological gambling taps into the same neural circuits as cocaine addiction (Breiter et al., 2001).

Further evidence for the role of dopamine in addictive gambling stems from research in the treatment of patients with Parkinson’s disease. Parkinson’s disease results from a lack of dopamine. When treated with large amounts of dopamine, sufferers in this research study began to report problem gambling behaviours. ‘Focus on research: Dopamine and Parkinson’s disease’ examines this phenomenon more closely.

More evidence is available about the roles of serotonin and noradrenaline in pathological gambling, but it is unsatisfactory. However, serotonin (synaptic) reuptake-inhibiting medications such as fluoxetine have been used with limited success in the treatment of pathological gambling. As the dopamine reward pathway theory is very much akin to the theories of drug and alcohol addiction, motivational interviewing, counselling and CBT approaches have also been used to treat pathological gambling.

FOCUS ON RESEARCH

Dopamine and Parkinson’s disease

Forty-one-year-old ‘Derrick’ and 63-year-old ‘George’ had two things in common: both had Parkinson’s disease and both, within one to two months after starting to take a dopamine-agonist medication, felt a strong urge to gamble.

Before this time, George had gambled at casinos about four times a year, and he had never overspent his self-allotted gambling limit. Now, he said, he felt an ‘incredible compulsion’ to gamble two or three times a week, even when he ‘logically knew it was time to quit’.

As for Derrick, he had never gambled before, but began gambling on the Internet and lost \$5000 within a few months.

The cases of Derrick and George were reported on 11 July on the website of Archives of Neurology, along with

those of nine other individuals who also had Parkinson’s disease and had started to show signs of pathological gambling after taking a dopamine agonist.

Recent studies of people with Parkinson’s suggest that newer and more powerful dopamine ‘agonists’, which bind to dopamine receptors on brain cells, are more likely to produce this ‘ventral overdose’ effect. A review in *Movement Disorders* in 2007 found that pathological gambling behaviour has been diagnosed two to eight times more frequently among Parkinson’s patients who take these agonists than among the general population. Yet it is not easy to reconcile such an effect with current models of dopamine signalling.

Sources: Arehart-Treichel, J. (2005). Do dopamine agonists spark gaming compulsions? *Psychiatric News*, 40(16), 16; Schnabel, J. (2009). Gambling among Parkinson’s patients raises questions about dopamine. *The Dana Foundation online*. 21 September.

QUESTIONS

- 1 Write a possible hypothesis that may be tested in investigating the effects of dopamine of gambling behaviours in Parkinson’s sufferers.
- 2 Explain one extraneous variable that may account for the increase in gaming behaviours.

PSYCHOLOGICAL CONTRIBUTING FACTORS

Character or personality features are an important component of pathological gambling. Social learning theory and schedules of reinforcement are also thought to play a role.

Psychoanalytic theory

The psychoanalytic theory of gambling examines the personality features of individuals in the development of the disorder. It is suggested that pathological gamblers have a **narcissistic personality**. Those with a narcissistic personality have grandiose ideas about their ability to control events and predict outcomes. Cognitive theorists propose that gamblers have distorted cognitive schemas in terms of their locus of control – in this case their locus of control is external; that is, not within their control (Burt & Katzman, 2000). So, gambling is not something that these individuals can control, even though they may *think* they can.

Social learning theory – schedules of reinforcement

The social learning theory model sees gambling as an operant behaviour contingent on reinforcement schedules (Bandura, 1977). The ‘cognitive behaviourism’ of social learning theory can be illustrated by three concepts proposed by Julian Rotter (1975). Rotter proposes that a person’s **psychological situation** (how a person interprets or defines the situation) is important in their response to that situation (Rotter & Hochreich, 1975). For

example, if you score a low mark on an exam, how would you interpret it? Would you see it as a challenge to work harder, a sign that you should drop the class, or an excuse to go to shopping or play video games instead of going to school? Your interpretation of the situation governs your behavioural response to it. This is why it is not enough to simply know the setting in which a person responds; it is important to also know their psychological situation because this may help to explain behaviour.

When applied to gambling, the psychological situation could explain why people keep trying after they have not won for a long time. Quite often, gamblers are quoted as saying things such as, 'I have had so many losses in a row that the win must be getting closer'. This reveals their psychological situation – they have interpreted the continual losses to mean that they must be due for a win soon, which motivates them to keep gambling. Of course, this interpretation of the situation is flawed – no matter how many losses have been experienced, the chances of winning are always the same.

Rotter's second concept, **expectancy**, refers to the anticipation that making a response will lead to reinforcement. For example, if a person has experienced success when betting on even numbers in the past, this is likely to cause an expectancy, and it is a likely that they will use the same strategy in the future. Expectancy therefore becomes a predictor of behaviour. Expected reinforcement may be more important than past reinforcement.

Rotter's third concept, **reinforcement value**, states that humans attach different subjective values to various activities or rewards. In the past, money was believed to be the positive reinforcement for the recurring nature of gambling. However, research has supported a view that physiological arousal (via the dopamine rewards system) has significant reinforcing properties. Skinner, the father of behavioural reinforcement theories, believed that a person's gambling behaviour is related to their previous reinforcement history. A 'big win' would therefore lead to an increased chance of that behaviour continuing, even when the reinforcement schedule reduced drastically, as the person continued to win less and lose more (Skinner, 1953).

Social learning theorists believe that the schedules of reinforcement may influence the development and maintenance of disorders such as gambling. Accordingly, reinforcement schedules such as those found in gambling – which pay off now and then, but not regularly – are believed to produce greater persistence in the behaviour, even after the reward has stopped. This is known as a *variable ratio schedule* and, as we learnt in chapter 6, it is the most difficult schedule of reinforcement to extinguish. We can therefore see that the variable ratio schedule, which prompts the incorrect assumption that 'a win is just round the corner', affects a gambler's perception of their psychological situation.

TREATING GAMBLING USING PSYCHOTHERAPIES

Gamblers often do not accept that they have a problem, nor do they readily engage in treatment. Gamblers are often forced into treatment as a result of legal problems, criminal problems with unpaid debts, bouncing cheques or (most often) family pressures.

Targeting the biological factors involved in gambling with the help of serotonergic medications has been found quite helpful and research into the use of those medications for the treatment of pathological gambling is increasing. But medication is not the only treatment option. Behavioural therapy, cognitive therapy, aversion therapy and psychodynamic psychotherapy have all been tried, and a CBT approach is gaining research support for usefulness in pathological gambling as well as problem social gambling.

Cognitive behavioural therapy

As cognitions play an important role in the continuation of gambling behaviours, it is important to address some of the distortions that develop in this disorder. For example, the pathological gambler will often selectively interpret results to their own advantage and their own systems of logic, and hence become embroiled in repeating the gambling behaviour. CBT would aim to have the gambler see these cognitive distortions and adjust their interpretations.

CBT for gambling would also address the behaviours experienced, such as losing track of time, disregarding financial limits and missing other social engagements in favour of gambling. This would be done over time, using a session-by-session approach to develop strategies to avoid the temptation of gambling.

Psychodynamic psychotherapy

The psychodynamic model is not often used in the treatment of gambling, but it can be helpful if the person with a gambling problem has other psychological problems such as depression or anxiety. Sigmund Freud believed that pathological gambling was a manifestation of self-punishment; that the gambler has an unconscious desire to lose arising from severe guilt. This guilt is a result of having to deal with psychological conflicts born of feelings of aggression. These conflicts cause significant

narcissistic personality

A personality attribute that is characterised by grandiose ideas about an individual's ability to control events and predict outcomes

psychological situation

How a person interprets or defines their situation
expectancy

The anticipation that making a certain type of response will lead to reinforcement

reinforcement value

Attaching different subjective values to various activities or rewards

psychological pain and the recurrent gambling behaviours are seen as attempts to ease this pain. However, as the source of the pain and conflict is often seen as being beyond personal control, the behaviours keep continuing without any resolution in sight (Moran, 2000).

Although there is limited research evidence of its usefulness, the psychodynamic psychotherapy model attempts to make therapists of other persuasions acknowledge and understand the unconscious and internal processes that may drive the gambling behaviour. Issues involving power, control, emotional intimacy, fantasies of importance, respect and loss are often seen as central to the gambling experience (Rosenthal, 1987).

SOCIOCULTURAL CONTRIBUTING FACTORS

There are many well-documented familial factors that can lead to pathological gambling, including loss of a parent by death, separation, divorce, desertion of a child before the age of 15, inappropriate parental discipline (absence, inconsistency or undue harshness), exposure to or availability of gambling activities for adolescents, a familial emphasis on material wealth as a symbol of success and a lack of familial emphasis on saving and budgeting (Sadock & Sadock, 2003).

More general societal factors also have a significant role to play in the initiation and maintenance of gambling behaviour. Unfortunately, governments of today increasingly rely on betting venues, casinos, Internet gambling companies and lotteries for revenue, which does not help the addicted gambler.

Gambling opportunities and social permission

In many ways, our state and country are unique in that we have public holidays for things such as horse races, when betting is rampantly encouraged. We have also started betting on other sporting events that in the past have not been a forum for gambling, such as cricket, tennis and football. In many ways, it has become the 'Australian way' to bet a few dollars on your favourite horse, run a sweepstake at work or engage in the family footy tipping competition.

Most major sporting events on the television will be accompanied by betting advertisements, often endorsed by role-model players, coaches and sports administrators. Hence, covertly, Bandura's social learning theory is exploited to entice ordinary Australians to bet, for example, 'just like Kevin Sheedy (a decorated AFL coach) does'. So, one may say that our society in general is 'permissive' in terms of gambling opportunities, and some may go as far as to say it is encouraged. The permissive nature of society in this regard may contribute to the development of pathological gambling behaviour.

The argument must be acknowledged, however, that in a culture such as ours, the individual has the ultimate responsibility for their actions; that

is, society is not responsible if a person becomes a pathological gambler after acting on the invitation to place a bet after watching a television advertisement. And it is certainly true that millions of Australians see these advertisements, but only a few go on to become problem gamblers. So while some people may be influenced by the accessible nature of gambling in the community, we cannot say that this social factor should always be held responsible.

There has also been much political debate about strategies that gambling venues utilise to perpetuate gambling. Factors such as lack of external light cues, lack of access to clocks and easy access to cash (via ATMs) have all come under considerable scrutiny. In many gaming venues alcohol is served at the gaming table, so there is no need to leave your post to buy a drink. Additionally, the alcohol helps to reduce inhibitions and encourage risk-taking behaviours. The long opening hours of many gaming venues is also of great concern – some gaming venues are open 24 hours a day. These hours appeal to people who do not have strong family and social networks and therefore target those most at risk of becoming addictive gamblers.

Social networks and recovery groups

Social networks and recovery groups have been found to be particularly useful in the treatment of problem and pathological gambling. Gamblers Anonymous (GA) was founded in the USA in 1957, modelled on Alcoholics Anonymous (AA). The 12-step model has been found useful in helping some people make a full recovery from their gambling problem.

GA is a type of an inspirational therapy in a group setting. It is initially dependent on the gambler making a very public confession of their gambling problems. Pressure to recover from peers present in the group (positive reinforcement) and the presence of recovered gamblers as 'sponsors' help the pathological gambler overcome their disorder. Pathological gamblers are given the opportunity to socially model themselves on recovered gamblers and learn from them. Drop-out rates are high for GA, but its usefulness cannot be underestimated.

A BIOPSYCHOSOCIAL UNDERSTANDING OF PATHOLOGICAL GAMBLING, ITS CAUSES AND ITS TREATMENT

We have seen that there is an intrinsic link between the biological factors in gambling (such as the dopamine rewards system) and their relationship and influence on cognitions and behaviours. A biological vulnerability by way of hypo-arousal of the dopamine reward system is exploited by several social and psychological factors that a person may experience in their lives.

Treatments for this disorder must take into account the individual contributions of these factors, but this knowledge must then be synthesised into a broad-based and multidisciplinary approach. This approach must incorporate biological treatments

such as medications, as well as treatments for cognitive, behavioural and psychodynamic issues that underpin the disorder. Using only one method to treat pathological gambling (and excluding other methods) is unlikely to be very successful and would be a disservice to the person seeking help.



'Videolink: Recovering from addiction' explains the steps that people suffering from addictive disorder must take in seeking treatment.

CHECK YOUR UNDERSTANDING 8.4

- 1 The difference between pathological gambling and social gambling is that social gambling:
 - A occurs with friends and family.
 - B has acceptable losses.
 - C lasts for a limited time period.
 - D All of the above
- 2 Match each stage of the development of gambling with its description.
 - a The winning stage i Gambling in a frenzy
 - b The progressive-loss ii Experiencing a big win stage
 - c The desperate stage iii Gaining insight that the money cannot be regained
 - d The hopeless stage iv Sufferers start living around their gambling
- 3 The effect of dopamine on the experience of pathological gambling is a _____ contributing factor to addictive disorders.
- 4 Which schedule of reinforcement does gambling operate under?
 - A Continuous
 - B Fixed ratio
 - C Variable ratio
 - D Variable interval
- 5 The belief that pathological gambling is a manifestation of self-punishment, with an unconscious desire to lose arising from severe guilt, is a belief of the _____ model.

A person who is psychotic undergoes a number of striking changes in thinking, behaviour and emotion. Psychotic disorders are among the most serious of all mental problems because a **psychosis** (or psychotic episode) reflects a loss of contact with shared views of reality and leads to significant social and occupational decline. The following comments, made by several psychotic patients, illustrate what is meant by a 'split' from reality (Torrey, 1988).

F Everything is in bits. You put the picture up bit by bit into your head. It's like a photograph that's torn in bits and put together again. If you move it's frightening.

F I felt I had the power to determine the weather, which responded to my inner moods, and even to control the movement of the sun.

F Last week I was with a girl and suddenly she seemed to get bigger and bigger, like a monster coming nearer and nearer.

Schizophrenia is a very debilitating and devastating illness and is one of the most commonly known psychotic disorders. It is marked by delusions (thoughts or beliefs that are not real), hallucinations (sensations that are not real), apathy, a split between thought and emotion, disorganisation of behaviour, cognitive impairment, disturbances of interpersonal communication, and social and functional impairment. Sadly, the most basic functions that give us the feeling of being a unique and self-directed individual are disturbed in this disorder (Treatment Protocol Project, 2004). Read 'A closer look: Types of schizophrenia' to learn more about the different types of schizophrenia.

One Australian in 100 will suffer from schizophrenia during their lifetime, and roughly half of all the people admitted to psychiatric wards in hospitals have schizophrenia. Most are young adults, but schizophrenia can occur at any age. Though men and women are affected by schizophrenia in approximately equal numbers, women tend to experience later onset, fewer periods of illness and better recovery (Devilly, 2004; Queensland Centre for Schizophrenic Research, 1999). There is no single cause of schizophrenia, but several biological, psychological, social and environmental factors are believed to contribute to the onset of schizophrenia in some people.

View 'Videolink: Schizophrenia' to hear one schizophrenia sufferer's personal experience.

Psychotic disorder: Schizophrenia

Psychotic disorders are a subset of mental disorders that present prominently with psychotic disorders characteristics. This subset includes, among others, disorders such as schizophrenia, schizopreniform disorder, delusional disorder, brief psychotic disorder, shared psychotic disorder, psychotic disorders due to physical illnesses and substance-induced psychotic disorder (American Psychiatric Association, 2000).

psychotic disorder

A mental disorder that involves disturbances in conscious thought and perceptions, and a loss of contact with reality (psychosis)

psychosis

A withdrawal from reality marked by hallucinations and delusions, disturbed thought and emotions, and personality disorganisation

schizophrenia

A psychosis characterised by delusions, hallucinations, apathy and a 'split' between thought and emotion

Types of schizophrenia

Is there more than one type of schizophrenia? Yes. Schizophrenia appears to be a group of related disturbances with four major sub-types.

Disorganised schizophrenia

Disorganised schizophrenia is marked by incoherence, grossly disorganized behaviour, bizarre thinking and flat or grossly inappropriate emotions.

This disorder comes close to matching the stereotyped images of 'madness' seen in movies. In disorganized schizophrenia, personality disintegration is almost complete: emotions, speech and behaviour are all highly disorganized. The result is silliness, laughter and bizarre or obscene behaviour. In disorganized schizophrenia, emotions may also become blunted or very inappropriate. For example, if a person with schizophrenia is told his mother just died, he might smile, giggle or show no emotion at all. If the person is given a present they may cry uncontrollably.

Disorganized schizophrenia typically develops in early adolescence or young adulthood. It is often preceded by serious personality disorganization in earlier years. Chances of improvement are limited, and social impairment is usually extreme (American Psychiatric Association, 2000).

Catatonic schizophrenia

Catatonic schizophrenia is marked by stupor, rigidity, unresponsiveness, posturing, mutism and, sometimes, agitated and purposeless behaviour.



Figure 8.22 A person suffering from catatonic schizophrenia; this position may be held for hours or even days.

The catatonic person seems to be in a state of total panic. Catatonic schizophrenia brings about a stuporous condition in which odd bodily positions may be held for hours or even days (see Figure 8.22). Sometimes, a condition called 'waxy flexibility' occurs. While in this state, the catatonic person can be arranged into any position, similar to a mannequin. These periods of immobility may be similar to the tendency to freeze at times of great emergency or panic. Catatonic individuals appear to be struggling desperately to control their inner turmoil. One sign of this is the fact that stupor may occasionally give way to agitated outbursts or violent behaviour. Mutism, along with a marked decrease in responsiveness to the environment, makes the catatonic patient difficult to 'reach'. Fortunately, this form of schizophrenia is very rare.

Paranoid schizophrenia

Paranoid schizophrenia is marked by delusions or by frequent auditory hallucinations related to a single theme, especially themes of grandeur or persecution.

Paranoid schizophrenia is the most common schizophrenic disorder. The main symptoms of paranoid schizophrenia are delusions and hallucinations. Delusions are often extreme, and sufferers will insist that they are true, even if they are impossible; for example, the case of the 43-year-old man with schizophrenia who was convinced he was pregnant (Mansouri & Adityanjee, 1995).

Some common types of delusions are: (1) depressive delusions, in which people feel that they have committed horrible crimes or sinful deeds; (2) somatic delusions, in which people believe their body is 'rotting away' or that it is emitting foul odours; (3) delusions of grandeur, in which people think they are extremely important; (4) delusions of influence, in which people feel they are being controlled or influenced by others or by unseen forces; (5) delusions of persecution, in which people believe that others are 'out to get them'; and (6) delusions of reference, in which people assign great personal meaning to unrelated events. For example, people sometimes think that television programs are giving them a special personal message (American Psychiatric Association, 2000). Delusions of grandeur and persecution are the most common types of delusions.

The most common psychotic hallucination is hearing voices. Sometimes these voices command patients to hurt themselves. Unfortunately, many people obey (Kasper, Rogers & Adams, 1996).

Undifferentiated schizophrenia

Undifferentiated schizophrenia is marked by prominent psychotic symptoms but none of the specific features of catatonic, disorganized or paranoid types.

The three specific types of schizophrenia just described occur most often in textbooks! In reality, people may shift from one pattern to another at different times (Heinrichs, 1993). Many people, therefore, are simply classified as suffering from undifferentiated schizophrenia.

BIOLOGICAL CONTRIBUTING FACTORS

The biology of schizophrenia has been intensely studied, because an improved neurobiological understanding will improve the way in which we manage and treat schizophrenia. Indeed, the neurochemical theories of schizophrenia came about in a reverse manner, when in 1951 Paul Charpentier discovered a chemical (now a medication) called Chlorpromazine that was effective in reducing psychotic symptoms.

Naturally, a scientific and systematic inquiry into the causation of schizophrenia would involve looking for genetic and neurochemical clues, and studies indicate an imbalance in the actions of some brain chemicals in people with the disorder.

Genetic predisposition

Studies of twins, as well as natural and adoptive families, suggest that genetic factors play an important role in the development of schizophrenia. For example, the child who has one parent with schizophrenia has approximately a 10 per cent chance of developing the disorder, whereas a child with two afflicted parents has a 40 per cent chance of developing schizophrenia. As one in 100 people will suffer schizophrenia in their lifetime, the risk of developing schizophrenia in the general population, with no afflicted relatives, is approximately one per cent.

Table 8.2 indicates the chances of developing schizophrenia over the course of a lifetime, depending on an individual's relationships with afflicted people. The statistics are based on the findings of Gottesman (1991) and Susser & Susser (1987).

Table 8.2 The chance of developing schizophrenia

RELATIONSHIP WITH SOMEONE WITH SCHIZOPHRENIA	CHANCE OF DEVELOPING SCHIZOPHRENIA IN LIFETIME
General population (no relationship)	1%
Sibling (either sex) with schizophrenia	8–10%
One parent with schizophrenia	10–15%
Two parents with schizophrenia	40%
Non-identical (fraternal) twin with schizophrenia	14%
Identical twin with schizophrenia	50%

While there appears to be a genetic link in schizophrenia, the specific genes involved have not been found. Several genes have been implicated, including the gene DISC1. New research involving non-embryonic stem cells has allowed scientists more insight into the genes implicated in schizophrenia and presents a way to potentially develop a biological model for the disease, which may lead to its treatment and – someday – possibly a cure. 'Focus on research: New hope on brain illness cure' explores this further.

FOCUS ON RESEARCH

New hope on brain illness cure

Melbourne scientists will transform skin biopsies taken from schizophrenia patients into stem cells in an effort to shed light on the cause and pathology of the disease.

The cutting-edge science, which could eliminate the need to use human embryos, was pioneered in Japan. Like embryonic stem cells, induced pluripotent stem (IPS) cells can be engineered to produce any kind of cell, including neural cells.

Now, in what is believed to be a world first, scientists at Melbourne's O'Brien Institute will use the technique to investigate schizophrenia, which affects about one in 100 people. Their work is aimed at showing how the disease alters the brain and could lead to better treatments or a cure.

The scientists have ethics approval to recruit a dozen schizophrenia patients, who will provide skin biopsies of 5 millimetres cubed. They will isolate skin cells (known as fibroblasts) from the biopsies, then genetically reprogram them to become stem cells.

The research will build on work already done at the O'Brien Institute taking stem cells from the post-mortem brain tissue of healthy people and modifying them so they behave more like stem cells from people with schizophrenia.

The work has allowed researchers to isolate a gene important in brain development – DISC1 – which is impaired in some schizophrenia patients.

Schizophrenia is underpinned by a handful of abnormal genes, and the aim is to work out their individual role in the disease and how they interact with environmental factors such as maternal infections.

Continued ▶

disorganized schizophrenia

Schizophrenia marked by incoherence, grossly disorganized behaviour, bizarre thinking and flat or grossly inappropriate emotions

catatonic schizophrenia

Schizophrenia marked by stupor, rigidity, unresponsiveness, posturing, mutism and, sometimes, agitated, purposeless behaviour

paranoid schizophrenia

Schizophrenia marked by a preoccupation with delusions or by frequent auditory hallucinations related to a single theme, especially grandeur or persecution

undifferentiated schizophrenia

Schizophrenia lacking the specific features of catatonic, disorganized or paranoid types

It is hoped that analysing stem cells from live schizophrenia patients – cells that already have all the coding for the disease – will develop understanding.

Researchers will also compare their findings with data from other sources including brain imaging of the patients.

The O'Brien Institute's director of stem cell medicine, Dr Jeremy Crook, said human stem cells were a powerful tool and using them – rather than mice – for the first time to investigate schizophrenia would create a biologically relevant model of the disease.

Hagan, K. (2010) 'New hope on brain illness cure.' *The Age*, 12 June.

QUESTION

- 1 What are the ethical issues in using stem cells to evolve therapies for medical and psychiatric illnesses?

Drug-induced onset

It has been found that schizophrenic hallucinations are linked to having an excess of the neurotransmitter dopamine. Research suggests that substance use is related to the development of schizophrenia because some drugs actually cause an increase in the amount of dopamine released in the brain. Such drugs include cannabis (see Figure 8.23), cocaine, LSD and amphetamines (speed and ecstasy). This means that an individual who uses such drugs is more likely to develop psychosis than someone who does not.



Figure 8.23 Drugs such as cannabis cause an increase in the release of dopamine in the brain. This can lead to psychosis.

Swedish psychiatrists conducted a famous study in which they interviewed 50 000 members of the Swedish Army about their drug consumption, and followed them up over the next 15 years. Results showed that those who were heavy consumers of cannabis at 18 years of age were six times more likely to be diagnosed with schizophrenia over the next

15 years, than those who did not take it. Many other studies have returned similar results (Murray, 2002).

It is important to note, however, that these drugs do not necessarily actually cause schizophrenia; they simply increase the risk that someone will develop the disorder as a result of excess dopamine. Additionally, as we will discover below, there has recently been a shift to focus on the contribution of other neurotransmitters to the development of schizophrenia.

Changes in brain activity

As we know, neurotransmitters are chemicals that assist in sending messages throughout the nervous system. Among the many that are known, dopamine, serotonin, noradrenaline, GABA, glutamate and small proteins called neuropeptides are known to play a role in schizophrenia. These neurotransmitters are normally present in the brain and are required for the normal functioning of brain activity, including attention, concentration, memory, and the integrity of the cellular structure of the neurons in the brain, among other things (Sadock & Sadock, 2003). PET scans can be used to show how the schizophrenic brain is functioning (see Figure 8.24).

As we have learnt, there has been a lot of focus on the role of dopamine in schizophrenic symptoms. Simply put, the dopamine hypothesis of schizophrenia states that schizophrenia results from too much activity of dopamine in the brain. It is easy, then, to understand why drugs that block dopamine activity are used to treat schizophrenia. However, we now know that the causation of schizophrenia cannot be explained by the seemingly simple, 'increased dopamine = increased psychotic symptoms' relationship (Harrison, 2000; Meltzer & Stahl, 1976). It was a somewhat simplistic theory that did not take into account the role of genetics, neuro-development, environment, infections and obstetric complications – the evidence for the involvement of which has accumulated over the past 40 years since the dopamine hypothesis was first formulated (Davis et al., 1991; Straub & Weinberger, 2006).

In recent years, the focus has shifted to another neurotransmitter in the brain called **glutamate** (or the N-methyl, D-aspartate [NMDA]). Glutamate is an excitatory neurotransmitter – that is, it excites the brain cells or neurons, particularly those involved in cognitive functions. It is believed that the reduced functioning of the receptor for glutamate has a significant impact on the neurotransmission of cognitive messages and this can potentially explain the positive (delusions, hallucinations), negative (apathy, poor attention span, poor socialization) as well as cognitive and affective symptoms of schizophrenia (Stahl, 2007; Howes & Kapur, 2009). Studies are still being conducted into the effects of various neurotransmitters on psychosis.

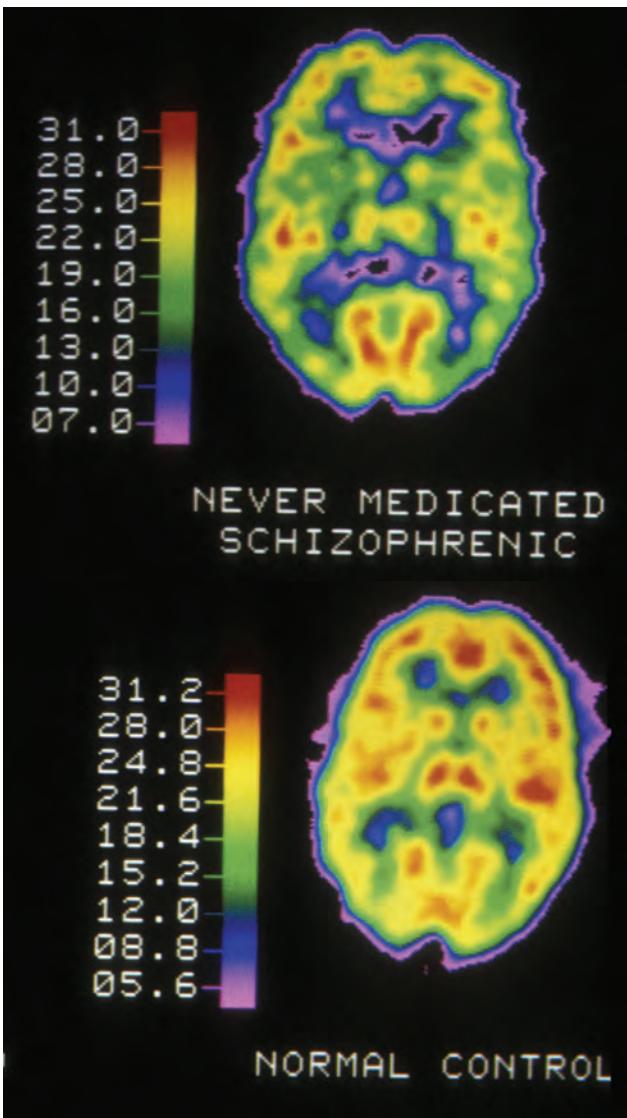


Figure 8.24 A PET scan showing the brain of a schizophrenic person and a healthy brain. Dramatic differences in brain activity can be seen – red areas denote brain activity, and there are markedly fewer red areas in the schizophrenic brain, especially in the frontal cortex (at the top of the scans), an area used for ordered thinking and planning.

THE USE OF MEDICATIONS

Antipsychotic medications are the cornerstone of treatment and recovery in people with schizophrenia. Antipsychotic medications currently used in the treatment of schizophrenia are concerned primarily with blocking the activity of dopamine transmission by occupying the receptors in the brain meant for dopamine. They also, however, block receptors for other neurotransmitters (such as serotonin) in differing percentages. Dopamine blockade is still a key concept in the treatment of psychosis but medications that have actions on serotonin receptors are much more effective for certain types of schizophrenia when compared to others that solely block dopamine.

Some examples of antipsychotic medications are Clozapine, Olanzapine, Risperidone, Quetiapine, Aripiprazole, Haloperidol and Chlorpromazine. For full effects, these medications need to be taken every day as prescribed by the doctor – not taking them regularly will lead to a relapse of the illness.

PSYCHOLOGICAL CONTRIBUTING FACTORS

Researchers now agree that although a predominantly psychological approach to understanding the cause of schizophrenia has been helpful to a degree in the past, no new thought has been advocated in the past 40 years. However, every person afflicted with this serious illness is a unique individual with their own psychological makeup. A professional and empathic clinically-oriented observation can help psychologists and other mental health practitioners understand how this disease can devastate a person's life (Sadock & Sadock, 2003).

Psychoanalytic and social learning theories

The important concepts that initially contributed to a psychological understanding of schizophrenia are psychoanalytic theories and social learning theories.

Freud's main contention of psychopathology in schizophrenia was one of ego disintegration and defect. As the development of ego is necessary to have a sense of self, Freud believed that ego disintegration led to difficulty in interpreting reality. Also, Freud theorised that a person with schizophrenia did not have a secure identity, which was believed to result from the absence of a close and stable attachment to mother during a person's infancy. This disintegration and lack of secure identity perhaps explained the disorganized nature of thought processes and bizarre nature of symptoms such as delusions and hallucinations, as well as paranoia – one of the most important features in schizophrenia. Despite the vast number of theoretical models, what is unquestionable is that the psychotic symptoms have meaning for the sufferer in schizophrenia.

As most of the scientists who studied schizophrenia in the early 1900s believed that maternal-infant interpersonal relatedness was disrupted in persons who go on to develop schizophrenia, human relatedness is believed to be a terrifying experience for such people. Therefore,

glutamate

An excitatory neurotransmitter particularly involved in cognitive functions

insight-oriented psychodynamic psychotherapies are often not a preferred mode of treatment for schizophrenia sufferers (Sadock & Sadock, 2003).

In the past, learning theorists believed that people who develop schizophrenia had poor models for learning during childhood (Sadock & Sadock, 2003). This contention is fraught with controversies and difficulties – some of the theories resulted in a generation of mothers being branded ‘schizophrenogenic’, and these mothers still struggle to live with the shame and guilt associated with the thought that somehow they are responsible for their child’s schizophrenia. There is actually no scientific truth to this theoretical belief.

Impaired mechanisms for reasoning and memory

Evidence suggests an impaired mechanism for reasoning and memory (as well as attention, concentration and motivation) in persons with schizophrenia, resulting in impairment in remembering lists of written passages or words, impaired ability to retain information in short-term memory, impaired ability to sustain attention, and impaired verbal fluency leading to problems in language processing. This is by no means a new understanding – indeed, it was described by Emil Kraepelin and Eugen Bleuler, the first people to coin the term ‘schizophrenia’ and categorise the disorder, at the turn of the 20th century.

In light of this, many of the current psychological treatments administered to schizophrenia patients in Australia and around the world address neuropsychological and neuropsychiatric deficits in the illness, as we will learn in the following sections.

TREATING SCHIZOPHRENIA USING PSYCHOTHERAPIES

Cognitive functions are impaired in schizophrenia, as evidenced by poor attentiveness, impaired ability to plan, difficulty in problem-solving and troubleshooting, and language difficulties. Psychologists play a key role in addressing these issues in the treatment of people with schizophrenia. They usually take a cognitive behavioural therapeutic approach, or use cognition remediation therapy (CRT). Stress management can also play a key role.

Cognitive behavioural therapy

Cognitive behavioural therapy has a significant evidence-base for usefulness in the treatment of psychosis, especially the clinical symptoms of the illness and relapse prevention. CBT for the schizophrenic would first involve psychoeducation, which is a key element of these interventions, both for the sufferer as well as for their family. Education has the dual role of reducing anxiety about the illness as well as improving the individual’s and the

family’s ability to cope with the illness. Education would include information about medications, their effects and side effects; importance of adhering to the medication regimen prescribed by the treating team; support for families and children; crisis intervention; and information about the stress-diathesis model, how to prevent relapses, and the role of alcohol and illicit drugs (Treatment Protocol Project, 2004).

Psychologists address the issue of impaired cognitive functions by taking a structured approach to problem-solving with clients as well as their carers and families. They would provide communication skills training and assertiveness training, as well as behavioural modification to address unhelpful behaviours (alcohol or illicit drug abuse). Some of the common elements of a CBT approach agreed upon by many therapists focuses on engaging with the person with psychosis, using alternative explanations to challenge delusional thoughts, reducing distress and emotional disturbance, helping make a link between thoughts and emotions, helping the person explore alternative views of events about which they have faulty or illogical reasoning, using several behavioural experiments to test reality, developing coping strategies to reduce stress from psychotic symptoms and developing relapse prevention strategies (Castle, Copolov & Wykes, 2003).

Cognitive remediation therapy

A relatively new approach in the treatment of schizophrenia is *cognitive remediation therapy* (CRT) (Wykes and Van der Gaag, 2001). A key component of this therapy is the learning of problem-solving skills, where patients learn to achieve small goals by their own efforts rather than being helped by others. This treatment strategy also includes individualised rehabilitation programs to specifically address cognitive problems, such as impaired memory and attention. The third component of this treatment is changing the sufferer’s environment so that it is less demanding on their cognitive functioning and means they have fewer everyday stressors to deal with. For example, this method may involve providing cues to remind people about upcoming appointments (such as with a doctor or therapist) so that the stress of remembering is minimised; this is particularly important in people with impaired memory function. Using this method, daily activities are micro-managed; for example, all the clothes required for a particular day might be kept in a separate box and labelled with the days of the week (Velligan et al., 2000). This component of CRT is also called cognitive adaptational training.

Occupational rehabilitation or vocational therapy

Based on their assessment of cognitive impairment, psychologists often make recommendations to occupational therapists, who then work with clients to attempt to reintegrate them into their usual

occupations or one that would seem appropriate to their level of skill and cognitive functioning. Holding a job gives schizophrenia sufferers a sense of purpose and also establishes a routine. This in turn helps the schizophrenia sufferer to improve their cognitive skills as well as increases their sense of pride in themselves.

Stress management

The interplay of biological, psychological and social factors is best epitomised by their integration within the **stress-diathesis model**. A stressful influence can act on an on-going vulnerability that already exists in the individual (a **diathesis**), and this stressful influence can then unmask the symptoms of schizophrenia that were previously underlying. The diathesis can be biological, environmental or both, and can be further shaped by stressful issues such as substance abuse, psychosocial stress and trauma (Sadock & Sadock, 2003). The stress-diathesis model is a very influential model in the understanding of how stress may precipitate a psychotic episode.

Stress management is a key principle in the preventive treatment of psychosis. Professor Patrick McGorry, a Victorian psychiatrist and director of young person's mental health service ORYGEN, was named the 2010 Australian of the Year for his contributions in the development of services and treatment strategies for young people with mental illness, particularly schizophrenia. The psychological treatments offered at ORYGEN and many other centres around the world are focused on enhancing the stress management abilities of their clients. We examined some stress management strategies in chapter 7.

SOCIOCULTURAL CONTRIBUTING FACTORS

A long time before the advent of the antipsychotic medications, the study of social and cultural factors was pre-eminent in attempting to understand not only schizophrenia, but many disorders. Studies of social and cultural issues as risk factors in developing schizophrenia include an assessment of the role of social disadvantage, early childhood trauma and other psychosocial stressors. Support factors, such as strong familial networks, psychoeducation and reduction of stigma, can help schizophrenia sufferers manage their disorder. Sociocultural contributing factors have varying impacts on not only the causation of the disorder, but also the course it runs through a person's life.

Social disadvantage

In the 1950s and 60s, schizophrenia was believed to be more prevalent in the unemployed and people belonging to the lower socioeconomic strata of society. The 'downward drift' and the 'social causation'



Figure 8.25 Psychologists believe that homelessness is a risk factor for the development of mental illnesses such as schizophrenia.

hypotheses were born out of these beliefs. The 'downward drift hypothesis' seemed to suggest that people with schizophrenia either could not rise out of their position in life, or drifted downwards on the social ladder due to the effects of the illness. Social stress and the stresses of poverty and urbanisation were believed to also cause schizophrenia and hence the 'social causation hypothesis' was proposed.

In modern times, these theories have been generally rebuked in terms of *causation*, but it is true that social disadvantage, poor socioeconomic status, homelessness and poor nutrition (amongst others) are key issues in the life of many patients with schizophrenia (see Figure 8.25). Though it is believed that these in themselves do not cause schizophrenia, they can be risk factors for the development and

cognitive remediation therapy (CRT)

A treatment for psychotic disorders that teaches problem-solving skills and improvement of cognitive problems

stress-diathesis model

An explanation of how a stressful influence can act on a pre-existing or on-going vulnerability (a diathesis) to unmask the symptoms of schizophrenia in an individual

diathesis

A pre-existing and ongoing vulnerability to something

progression of the disorder because they compromise the person's ability to deal with the disorder. These factors are well-known to cause relapse of this illness time and again, despite the patient being on regular treatment.

Trauma

A child who is exposed to early psychological trauma – for example, through abuse and exposure to violence – may be more vulnerable to developing schizophrenia than a child who has not been exposed to such trauma. While trauma can certainly have a variety of negative effects on an individual's psychological development and exposure to such events can trigger uncharacteristic thoughts and emotional experiences, the research evidence to support the possible link between trauma and schizophrenia is sparse and difficult to prove.

Other psychosocial stressors

Communication (or its dysfunction) within families is often a key principle in the psychosocial understanding of schizophrenia. Although it is important to note that families do not *cause* psychosis, and not every child who grows up in a dysfunctional family will develop schizophrenia, certain types of pathological behaviours within the family do put people under immense stress and, for those psychologically vulnerable to development of schizophrenia, may even lead to unmasking of the disorder. (This is explored further in 'A closer look: The Genain sisters'.)

Another environmental factor that may contribute to the development of schizophrenia is complications during pregnancy and birth – that is, if a pregnant woman suffers disease, malnutrition or other complications, this may contribute to the risk of her baby developing schizophrenia. Professor John McGrath, a psychiatrist at the Queensland Centre of Schizophrenia Research, believes that the lack of UV light for a mother during pregnancy can be an important factor (McGrath, 2001). This might account for the fact that babies born between February and April in North America and Europe are 3–10 per cent more likely to develop schizophrenia than babies born at any other time of the year (Davies et al., 2003; Mortensen et al., 1999). Professor McGrath has also found that, in Queensland, there is a peak in the birth of babies with schizophrenia every three to four years. This trend coincides with the El Niño weather system that causes gloomy, overcast weather (thus a reduced lack of UV light) every three to four years.

How does UV light affect the likelihood of developing schizophrenia? Professor McGrath suggests that one of the things UV light does is convert a cholesterol-like molecule in the skin into vitamin D. Research suggests that vitamin D is needed in building the brain and developing tissue in the embryo during pregnancy (McGrath, 2001).



Figure 8.26 The lack of UV light for a mother during pregnancy is believed to contribute to the risk of her baby developing schizophrenia.

Sociocultural support factors

While a dysfunctional family environment may increase the likelihood that a person predisposed to schizophrenia will develop the illness, conversely a supportive family or social environment is important in the positive management of schizophrenia. If a person with schizophrenia is surrounded by social networks of people who understand their illness, the illness will be more easily managed.

Psychoeducation – specific education about a mental illness – is therefore important in the management of disorders such as schizophrenia. Psychoeducation can work on two levels: It can help family and friends of a person with schizophrenia to understand the illness and how it affects their loved one, as well as provide strategies to help them deal with the effects of the mental illness and provide the best support to their loved one. It can also help the sufferer themselves by increasing their awareness of not only how their disorder affects their own life, but how it affects the lives of the people around them. This can in turn increase the sufferer's sense of control of their illness, and may lead to decreased episodes.

Psychoeducation can also lead to removal of the stigma surrounding psychotic disorders. Social stigma associated with schizophrenia is a major cause of stress for those afflicted by it, and many individuals with schizophrenia are devalued and discriminated against because of their mental illness (Dickerson et al., 2002). Removing the

social stigma surrounding schizophrenia will help sufferers (and their supporters) manage their illness in an environment that is not judgemental or discriminatory. It will also ease the worry about being viewed unfavourably in society and avoidance of self-disclosure about their mental illness. But until the time when effective treatments eliminate the pervasive effects of schizophrenia and public attitudes change, persons with schizophrenia will continue to face problems of mental illness stigma (Dickerson et al., 2002).

A BIOPSYCHOSOCIAL UNDERSTANDING OF SCHIZOPHRENIA, ITS CAUSES AND ITS TREATMENT

People with schizophrenia go through cycles of 'well' and 'unwell' periods. Sometimes symptoms will persist and are present despite the sufferer receiving the best treatments. The personal and familial costs are high, as are costs to society. Schizophrenia is a chronic and devastating disorder, and hence it is one of the most widely researched disorders within the mental health community.

We have learnt that the use of a biopsychosocial paradigm is a very useful tool to understand not only the disorder, but also how it is treated. Genetic and biological predispositions can be exposed by environmental and psychosocial triggers that unmasks the disorder.

Public-health treating teams are often multi-disciplinary and may include a doctor, a psychologist or psychiatrist, a social worker, an occupational therapist, a carer and a consumer consultant. (A consumer consultant is a person who has previously received mental health care and is now well, and who now works in the mental health service helping current patients.) The treatments administered by these people appear to act in a complementary fashion to address specific deficits in schizophrenia – medications take care of the neurotransmitter abnormalities, CBT and CRT strategies address the cognitive deficits in the disorder, and occupational therapists and social workers address other psychosocial issues in the disorder.

'A closer look: The Genain sisters' outlines a case in which genetic and environmental factors played a role in the development of the illness, and aids our understanding of the biopsychosocial concept when applied to this disorder.

The Genain sisters

The story of a set of quadruplets known as the Genain sisters is an interesting look at the interaction of genetic and environmental factors on mental disorders. (The girls were given the surname 'Genain' to protect their identity. The first names by which we know them – Nora, Iris, Myra and Hester – are also fictitious.)

A CLOSER LOOK

The Genain sisters were born in 1930. During infancy and their pre-school years, the girls were not allowed to have any social interaction with anyone outside the family, and when they reached school age they continued to be socially restricted. The girls' father, Mr Genain, was an alcoholic. He spied on the girls and terrorised them, and it is alleged that he sexually molested at least two of them. Their mother and father had a poor relationship, and their mother treated the quadruplets from infancy as an extension of herself rather than as individuals (Wallace, 1965). For the most part, although she was protective of the girls, Mrs Genain was curiously blind to her husband's actions and offered her daughters little support. Overall, the girls had a nightmarish family life.

By the time the Genain quadruplets reached high school, they began to act strangely. Hester broke light bulbs and tore buttons off her clothes. By age 20, Nora moaned at meals and complained that the bones in her neck were slipping. At night she stood on her knees and elbows in bed until they bled. At age 22, Iris quit her job, complaining, 'I am pinned down. Someone wants to fight and I don't want to.' Soon after, she 'went to pieces'. She screamed, drooled at meals, and talked of hearing voices. Myra, the fourth quadruplet, panicked easily and couldn't be reassured, but did not actually break down until the age of 24 (Rosenthal & Quinn, 1977). All four of them were diagnosed as schizophrenic before the age of 25, and they were consequently studied by the United States National Institute of Mental Health from 1955–8. All of the girls except Myra have been in and out of psychiatric institutions ever since.

But the Genain sisters' family life and upbringing were not the only factors at play in this case. Mr Genain had a history of mental illness in his family – he was one of nine siblings, of which one was alcoholic and one retarded; his uncle was psychotic; and his mother had a nervous breakdown accompanied by suicidal thoughts. While a specific psychiatric diagnosis was never made on either Genain parent, the father was an obviously disturbed person; suspicious, domineering, destructive, abusive and alcoholic (Wallace, 1965).

It seems that both heredity and an unhealthy environment led to the Genain sisters' problems (Carson, Butcher & Mineka, 1997). There was a history of mental illness in the family, but additionally the sisters were severely emotionally and socially deprived, and also exposed to and (at least emotionally) abused by a disturbed father.

Further support for the conclusion that heredity and environment interacted to result in the girls' psychosis comes from studying Myra. Although the Genains were genetically identical, the expression, or intensity, of the schizophrenic disorder was unequal among the quads (Mirsky et al., 1984). The severity of the disorder differed among them. Myra was the least ill of the sisters – she was never hospitalised and was able to lead a relatively normal life with her illness (the others did not succeed in this). Interestingly, Myra was her mother's favourite, and was the one who was able to keep the most distance from her father. If heredity alone caused schizophrenia, Myra would have been just as ill as her sisters, because they shared the same genetic makeup.

It appears, then, that heredity may set higher or lower thresholds for psychosis. Whether a person becomes actively disturbed, however, may depend on the kind of stresses to which she or he is exposed.

CHECK YOUR UNDERSTANDING 8.5

- 1 In the experience of schizophrenia, seeing something that does not exist is known as a _____; whereas believing something that is not real is known as a _____.
- 2 Schizophrenia can result from _____ dopamine in the brain.
 - A too much
 - B too little
 - C no
 - D only
- 3 A pre-existing or on-going vulnerability to developing a particular disorder is known as _____.
- 4 A treatment that teaches problem-solving skills and improvement of cognitive problems is known as:
 - A electro-convulsive shock therapy.
 - B brainstorming.
 - C cognitive behavioural therapy.
 - D cognitive remediation therapy.

- 5 Indicate whether the following statements are true (T) or false (F).
- a Hallucinations can be auditory or visual in nature.
 - b Schizophrenia cannot result from experimenting with illegal drugs.
 - c People suffering from schizophrenia also often suffer from memory loss and blackouts.
 - d A patient suffering from delusions may see a monster chasing them.
 - e A symptom of schizophrenia is the inability to distinguish between reality and fantasy.

Chapter summary

WORDCHECK

TEST
YOURSELF

Specific phobia:

- A phobia is an intense, irrational fear and avoidance of a particular object, activity or situation.
- A phobia is an anxiety disorder and as a result is characterised by feelings of apprehension, dread or uneasiness. The experience of anxiety is a response to an unclear or ambiguous threat.

Biological contributing factors to a specific phobia:

- The stress response – Sufferers adapt slowly to repeated stressors and respond excessively even to simple stimuli that would not provoke anxiety in many others.
- Neurotransmitters such as gamma amino butyric acid (GABA) can have an inhibiting response on the brain and can have a calming, dulling or slowing effect; there is a lack of this neurotransmitter in an anxiety-related response.
- Some studies suggest that up to 30 per cent of people with a phobic disorder may have a family history of someone closely related with a phobia of the same type.

Psychological contributing factors to a simple phobia:

- The psychodynamic model claims that phobias occur because an individual fails to utilise the defence mechanism of repression.
- The behavioural model claims that phobic anxiety could be the result of learning.
- The cognitive model claims we may sometimes couple faulty reasoning and rationale with fearful stimuli from the environment and hence a new cognition is formed into a phobia.

Psychotherapies in the treatment of a specific phobia:

- Cognitive behavioural therapy involves the application of learning principles to change thought processes and human behaviour, especially maladaptive behaviour.
- Systematic desensitisation is a technique that teaches sufferers to associate their feared stimulus with relaxation and feelings of being calm.
- Flooding involves the person being exposed to the real feared stimuli.

Sociocultural contributing factors to a specific phobia:

- Several factors in the environment can predispose an individual to the development of specific phobias, such as a traumatic event.
- According to social learning theory and parental modelling, children learn from their parents and often mirror what the parents do. Children learn how to respond to stress and difficulties by observing how parents respond to these.

Mood disorder: Major depression:

- Major depression is a mood disorder marked by lasting and extreme low emotions. Everything looks bleak and hopeless, and a person's suffering is intense.

Biological contributing factors to depression:

- Genetic studies such as family studies, adoption studies and linkage studies have shown a clear link between genetics and development of mood disorders.
- Serotonin is involved with many different functions; one function is that it makes us feel happy. The fact that people with depression have reduced levels of serotonin has contributed to the belief that it is involved in the development of depression.
- Noradrenaline is a neurotransmitter that is responsible for the body's reaction to stressful situations, such as that seen during the fight-flight response. People who suffer depression are found to have low levels of this neurotransmitter.

Psychological contributing factors to depression:

- Beck postulated that the 'cognitive triad' of depression is at the centre of the development of depression from the cognitive perspective. The cognitive triad involves a negative view of self, a negative and hostile perception of the world as a demanding place, and a negative expectation of suffering and failure in the future.
- Learnt helplessness is an acquired inability to overcome and avoid aversive stimuli or situations. It is common in depression sufferers.
- Stress has several factors that can cause depressive cognitions such as worthlessness, helplessness and hopelessness.

Psychotherapies in the treatment of depression:

- Cognitive behavioural therapy involves a step-by-step effort to correct negative thoughts that lead to depression or similar behavioural problems.
- The psychodynamic explanation proposes that depression is caused by repressed anger. This anger is displaced and turned inward as self-blame and self-hatred.

Sociocultural contributing factors to depression:

- There is evidence to suggest that factors such as abuse, poverty, social isolation and social stressors all increase the likelihood of suffering from depression.
- There is research evidence to suggest that in some persons without a close and confiding interpersonal relationship, major depressive disorder occurs more often.

Addictive disorder: Gambling:

- Gambling is a serious social problem, sanctioned by many societies worldwide as a harmless pastime, but in reality with significant costs to the individual, the family, society and workplaces.
- Gambling comes under the banner of impulse-control or addictive disorders.

Biological contributing factors to gambling:

- Research indicates that pathological gambling is an addiction similar to a chemical addiction, as it excites the neurotransmitter dopamine.

Psychological contributing factors to gambling:

- Social learning theory believes that money is the positive reinforcement that encourages the recurring nature of gambling. Gambling operates under a fixed ratio schedule, which is highly resistant to extinction.

Psychotherapies in the treatment of gambling:

- Cognitive behavioural therapy addresses some of the cognitive distortions that develop as well as the behaviours experienced.
- Sigmund Freud believed that pathological gambling was a manifestation of self-punishment, with an unconscious desire to lose arising from severe guilt.

Sociocultural contributing factors to gambling:

- In Australia, gambling is socially permissible.
- Social networks and recovery groups have been found to be particularly useful in the management of problem as well as pathological gambling. Due to the addictive nature of gambling, Gamblers Anonymous (GA) was founded in the United States of America in 1957.

Psychotic disorder: Schizophrenia:

- Schizophrenia is marked by delusions (thoughts or beliefs that are not real), hallucinations (sensations that are not real), apathy, a split between thought and emotion, disorganisation of behaviour, cognitive impairment, disturbances of interpersonal communication and social and functional impairment.
- Schizophrenia is a psychotic disorder.

Biological contributing factors to schizophrenia:

- Studies of twins, as well as natural and adoptive families, suggest that genetic factors play an important role in the development of schizophrenia.
- Research suggests that substance use is related to the development of schizophrenia. Such drugs include cannabis, cocaine, LSD and amphetamines.
- The dopamine hypothesis of schizophrenia states that schizophrenia results from too much dopamine activity in the brain.
- Glutamate is an excitatory neurotransmitter that is involved in cognitive functions and has been linked to the experience of hallucinations and delusions.

Psychological contributing factors to schizophrenia:

- Schizophrenia is often characterised by a disability in attentiveness and memory; this may underpin the development of some of the illogical and unreasonable thoughts and beliefs in the disorder.
- A stressful influence can act on a pre-existing or on-going vulnerability (diathesis) to unmask the symptoms of schizophrenia.

Psychotherapies in the treatment of schizophrenia:

- Cognitive behavioural therapy takes a structured approach, providing communication skills training and assertiveness training, as well as behavioural modification to address unhelpful behaviours.

- Cognitive remediation therapy is a treatment that teaches problem-solving skills and improvement of cognitive problems.

Sociocultural contributing factors to schizophrenia:

- Social disadvantage, poor socioeconomic status, homelessness and nutritional factors (among others stressors) are key issues in the life of many patients with schizophrenia, but it is believed that these in themselves do not cause schizophrenia.
- A child who is exposed to early psychological trauma may be more vulnerable to developing schizophrenia.

Apply your knowledge and skills

SECTION A: MULTIPLE-CHOICE QUESTIONS

- 1 A psychological technique used to facilitate positive changes in personality, behaviour or adjustment is known as:
 - the biopsychosocial approach.
 - psychotherapy.
 - a case study.
 - mental illness.
- 2 Hallucinations and delusions are common symptoms in which type of schizophrenia?
 - Paranoid
 - Disorganised
 - Residual
 - Undifferentiated
- 3 Schizophrenia is:
 - an addictive disorder.
 - only developed as a result of biological factors.
 - characterised by disorganised thought patterns and emotions.
 - the same thing as severe depression.
- 4 Which of the following characteristics are not accurate in describing the fear associated with a phobia?
 - It is persistent.
 - It is irrational.
 - It is not always present.
 - It is intense.
- 5 During cognitive therapy in the treatment of depression, a psychologist seeks to eliminate thinking patterns that are maladaptive. When individuals let upsetting events affect unrelated situations it is known as:
 - selective perception.
 - overgeneralisation.
 - all-or-nothing thinking.
 - tactical ignoring.

- 6** A phobia is a type of _____ disorder.
- mood
 - psychotic
 - addictive
 - anxiety
- 7** A chemical in the brain that is released between the synapses of two neurons is known as a:
- neuron.
 - neurotransmitter.
 - neurochemical.
 - hormone.
- 8** The chemical substance that is most closely linked to the compulsion of gambling is known as:
- dopamine.
 - GABA.
 - noradrenaline.
 - serotonin.
- 9** The key role of gamma amino butyric acid in the experience of anxiety is that it:
- should have an inhibiting response, calming an individual.
 - should have an excitatory response, calming the individual.
 - should have an inhibiting response, preparing the individual for action.
 - All of the above
- 10** In experiments by Seligman investigating learnt helplessness, he found that dogs that were previously exposed to an inescapable shock would:
- escape when given the opportunity.
 - not escape, even when given the opportunity.
 - escape only when shocked, not to the sound of the conditioned tone.
 - bite the experimenter.
- 11** Reno is struggling to give up gambling. Which of the following suggestions would be least effective in changing the behaviour?
- Cognitive behavioural therapy
 - Joining a recovery group
 - Gambling more to see that there is no logic behind cognitive distortions
 - Psychodynamic psychotherapy
- 12** Cognitive remediation therapy is used in the treatment of which mental illness?
- Anxiety
 - Depression
 - Gambling
 - Schizophrenia
- 13** The role of genetics and neurotransmitters is a _____ effect in the development and treatment of mental disorders.
- biological
 - psychological
 - cognitive
 - sociocultural
- 14** The experience of gambling is strengthened by the fact that a reward is presented on a variable ratio schedule. This means that:
- rewards are given after every correct response.
 - rewards are given after a random amount of time.
 - rewards are given after a random number of responses.
 - rewards are never given.
- 15** The advertising of gaming and betting venues on television is just one way that Australians are shown that gambling is a permissible behaviour. This is a _____ factor in the development and management of gambling.
- biological
 - psychological
 - behavioural
 - sociocultural

SECTION B: SHORT-ANSWER QUESTIONS

- Identify and describe three symptoms of a phobia.
- Name two groups of people who are at a high risk of experiencing an anxiety disorder and explain why they are considered at risk.
- Identify and describe the symptoms of major depression.
- Identify one type of schizophrenia and describe two symptoms of this type of schizophrenia.
- What does cognitive behavioural therapy involve?
- Are males or females more likely to suffer from major depression? Why?
- What are two differences between social gambling and pathological gambling?
- Why do you think gambling is known as an ‘impulse-control disorder’ by psychologists and psychiatrists?
- Susan is referred to a psychologist by her local doctor because she has begun rambling incoherently when she is stressed. An example of Susan’s speech includes, ‘Come and take my hand, you evil being. I can’t have it on my head any longer. I want an apple for tomorrow.’ Susan often

also grimaces and frowns when she speaks in this manner. What sort of mental disorder is Susan likely to be diagnosed with?

10 What is glutamate and what does it do?

SECTION C: EXTENDED-RESPONSE QUESTION

Sufferers of social phobia fear, and avoid, social and performance situations (e.g. meeting people, parties, eating in restaurants, public speaking). These fears often lead sufferers to underperform at work and make it difficult for them to establish and maintain close relationships.

Mr X, a 20-year-old, has presented at Dr Ruffus' clinic for help with his social phobia. Discuss how the biopsychosocial model can be used to understand and treat Mr X's phobia.

This question is worth 10 marks.

SECTION D: ASSESSMENT TASK

Essay on a mental health disorder

Choose a mood, addictive or psychotic disorder that has been discussed in this chapter. Write an essay of between 700 and 1000 words that addresses the following criteria in relation to your chosen disorder.

Criterion 1: *Specific facts associated with the disorder*

- Definition
- Family the disorder belongs to
- Typical age of onset
- Prevalence (how common the disorder is)
- Gender breakdown

Criterion 2: *Symptoms of the disorder*

- Details about at least three symptoms associated with the disorder

Criterion 3: *Possible treatment for the disorder*

- Name and describe at least two possible treatments for the disorder.

Criterion 4: *Biopsychosocial model*

- Discussion of how the biopsychosocial model seeks to explain the experience and development of the disorder

Criterion 5: *Format and structure*

- Well-structured, formal essay
- Use of clear scientific terminology
- Clear referencing