KEY KNOWLEDGE

- The distinction between predisposing risk factors (increase susceptibility), precipitating risk factors (increase susceptibility and contribute to occurrence), perpetuating risk factors (inhibit recovery) and protective factors (prevent occurrence or re-occurrence)
- The influence of biological risk factors including genetic vulnerability to specific disorders, poor response to medication due to genetic factors, poor sleep and substance use
- The influence of psychological risk factors including rumination, impaired reasoning and memory, stress and poor self-efficacy
- The influence of social risk factors including disorganised attachment, loss of a significant relationship and the role of stigma as a barrier to accessing treatment
- The concept of cumulative risk.

4P factor model

- Biological risk factors
- Psychological risk factors
- Social risk factors
- Cumulative risk
Anyone can develop a mental health disorder. Research findings indicate that about one in five Australians aged 16–85 years experiences a mental disorder at some time in their lives. This is around 4.5 million people. Younger people are more likely to have a mental disorder than older people, with the prevalence decreasing with age.

Mental disorders impact on people’s lives at different levels of severity. Although a significant number of people report symptoms that have a severe, chronic and disabling effect on their lives, many do not seek or have access to support. Of those who access support, many do not fully engage with or continue receiving support. Of those who receive appropriate ongoing treatment and support, most recover well and are able to lead fulfilling lives (ABS, 2007; SANE, 2016a).

A combination of internal and external factors contribute to the development and progression of a mental disorder at any point in time. Some factors are common among particular types of disorders whereas others occur in relation to specific disorders only.

In this chapter we will examine examples of biological, psychological and social factors that tend to place an individual at a greater risk for developing a mental disorder and which may perpetuate the disorder or inhibit recovery. We start with a description of the 4P factor model that may be used in analysing mental health and the development and progression of a mental health disorder.
4P FACTOR MODEL

The 4P factor model describes four types of influences that contribute to the development and progression of mental health disorders. These are called predisposing risk factors, precipitating risk factors, perpetuating risk factors and protective factors. All are crucial elements of the model.

In the 4P factor model, a risk factor is any characteristic or event that increases the likelihood of the development or progression of a mental disorder. This may be a biological, psychological or social factor. Risk factors can have a direct or indirect effect on mental well-being and typically combine in a way that is unique to each individual. Similarly, a risk factor for one person may not have the same effect or degree of influence on another person.

The presence of one or more of the 4P risks factors does not necessarily mean someone will develop a mental disorder or never recover. However, as the number of risk factors increases so too does the likelihood of developing a disorder, as does the likelihood of recovery being inhibited. Some risk factors are more significant than others. Some have been described as ‘toxic’; for example, sexual or physical abuse (Mind Matters, 2016b).

The impact of a risk factor can often be reduced, either by addressing the specific factor or by strengthening one or more protective factors. A protective factor is any characteristic or event that reduces the likelihood of the occurrence or recurrence of a mental disorder, either on its own or when risk factors are present. Protective factors may be thought of as strengths or assets that help safeguard against the effects of risk factors and minimise their impact. As with risk factors, protective factors may be biological, psychological or social in origin. Common protective factors include those associated with resilience (e.g. positive outlook, ability to regulate emotions), supportive family relationships and access to social support.

The 4P factor model is sometimes described as a subset of the biopsychosocial approach when analysing a mental disorder. As shown in table 12.1, the model can be used to bring together and organise the variety of factors believed to contribute to the development and progression of a mental disorder in any individual. This assists the mental health professional to understand why the person developed a disorder and why it is progressing as it is, taking account of the relative contributions of different types of factors.

![Figure 12.3](image)

**FIGURE 12.3** A mental health professional can use the 4P factor model to help understand why an individual is presenting with a mental disorder at a particular point in time.

<table>
<thead>
<tr>
<th><strong>4P factor model</strong></th>
<th><strong>Biological factors</strong></th>
<th><strong>Psychological factors</strong></th>
<th><strong>Social factors</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Predisposing risk factors</td>
<td>Genetic vulnerability</td>
<td>Personality traits (e.g. poor self-efficacy)</td>
<td>Disorganised attachment</td>
</tr>
<tr>
<td>Precipitating risk factors</td>
<td>Poor sleep</td>
<td>Stress</td>
<td>Loss of a significant relationship</td>
</tr>
<tr>
<td>Perpetuating risk factors</td>
<td>Poor response to medication due to genetic factors</td>
<td>Rumination Impaired reasoning and memory</td>
<td>Role of stigma as a barrier to accessing treatment</td>
</tr>
<tr>
<td>Protective factors</td>
<td>Adequate diet and sleep</td>
<td>Cognitive behaviour strategies</td>
<td>Support from family, friends and community</td>
</tr>
</tbody>
</table>

*Source: VCAA*
The four risk factors

A **predisposing risk factor** increases susceptibility to a specific mental disorder. For example, a family history of schizophrenia is a predisposing risk factor for developing schizophrenia. A predisposition increases the likelihood of the development of a disorder. It does not mean that an individual will inevitably develop the relevant disorder at some time in their life, so it is not a ‘causal’ factor. Instead, an individual with a family history of a particular disorder, for example, is considered more likely to develop that disorder than someone without a family history of the disorder.

A **precipitating risk factor** increases susceptibility to and contributes to the occurrence of a specific mental disorder. For example, a major stressor or the experience of acculturative stress or a catastrophic event may trigger onset of a disorder. Precipitating factors are the immediate factors or events that have caused the individual to experience symptoms ‘now’. They are often described as having a temporal (‘timing’) relationship with a disorder because they commonly precede the onset of the disorder. Two different people may experience the same precipitating event but react differently depending on their backgrounds, life experiences, social support, coping strategies and current circumstances.

A **perpetuating risk factor** maintains the occurrence of a specific mental disorder and inhibits recovery. These are the factors that are causing a person’s symptoms to continue or progressively worsen. For example, continuing to use a particular substance may perpetuate an associated substance use disorder and also prevent recovery from the disorder. Other perpetuating risk factors could be unresolved predisposing or precipitating factors, ongoing bullying, an abusive marital relationship, physical illness, social withdrawal, insomnia and personal characteristics such as poor coping abilities or low resilience.

A **protective factor** reduces or prevents the occurrence or recurrence of a mental disorder. These factors typically vary in relation to a specific disorder. For example, lack of substance use would help prevent occurrence (or recurrence) of a substance use disorder. Some of the more generic protective factors that tend to be relevant to many disorders include having good relationships with family and friends, access to social support and personal characteristics such as resilience, high self-esteem and average or above average intelligence.

Table 12.2 shows an example of the contribution of the 4P factors to the development and progression of a mental disorder. This example involves 46-year-old Catherine who has just been diagnosed as having major depressive disorder. Catherine works 60+ hours per week as chief executive officer of a biochemical company. Her job is extremely demanding and she is responsible for a team of 73 employees. Because Catherine lives alone, she makes the time to regularly attend a church with a community that is very supportive. Catherine has a history of depression in her family (her maternal grandmother) and three months ago, she found out she has motor neurone disease.

**TABLE 12.2** Example of the 4P factor model: the case of Catherine

<table>
<thead>
<tr>
<th><strong>4P factor model</strong></th>
<th><strong>Catherine’s factors</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Predisposing risk factors</strong></td>
<td>Family history of depression</td>
</tr>
<tr>
<td><strong>Precipitating risk factors</strong></td>
<td>Diagnosis of a serious illness (motor neurone disease)</td>
</tr>
<tr>
<td><strong>Perpetuating risk factors</strong></td>
<td>Lives alone, Unsupportive and demanding work environment</td>
</tr>
<tr>
<td><strong>Protective risk factors</strong></td>
<td>Church community provides a source of social support, Resilience, Self-esteem, Intelligence</td>
</tr>
</tbody>
</table>

**LEARNING ACTIVITY 12.1**

**Review questions**

1. Explain what the 4P factor model is with reference to the concept of risk.
2. (a) Distinguish between risk and protective factors with reference to their impact on mental health.
   (b) Give an example of a specific personality characteristic that could be a risk factor and/or a protective factor, ensuring you explain how the characteristic could function as either type of factor.
3. Name and describe the four risk types with reference to examples different from those in the text.
4. Describe the relationship between the 4P factor and biopsychosocial models in relation to mental health.
5. Explain why exposure to and influence of risk factors may be considered unique to each individual.
6. (a) Make a copy of table 12.1 including only the headers for the columns and rows.
   (b) Refer to table 12.2 and allocate each of ‘Catherine’s factors’ into one of the categories of your table.
   (c) Complete the rest of your table with examples of other possible factors.
BIOLOGICAL RISK FACTORS

Biological risk factors either originate or develop within the body and consequently may not be under our control. These can include genetic vulnerability to a specific disorder, poor response to medication due to genetic factors, poor sleep and substance use.

Genetic vulnerability

A genetic vulnerability to a mental disorder means having a risk for developing a specific mental disorder due to one or more factors associated with genetic inheritance. Having a genetic vulnerability places an individual at a higher risk than that of the general population, but it does not mean that they will definitely develop the relevant disorder. Nor does it mean that there is a single gene for developing a disorder. Instead, a number of genes are likely to contribute in subtle ways to the onset and expression of a disorder under certain conditions.

Schizophrenia is one of the best known examples of genetic vulnerability to a mental disorder. Many research studies have consistently found that people who have a biological relative with schizophrenia have an increased risk of developing schizophrenia. Schizophrenia is a psychotic disorder characterised by disturbances and disorganisation of thoughts, perceptions, feelings and behaviour. Many people with schizophrenia hear or see things that are not there, hold beliefs that are odd or not true, and speak or behave in a disorganised way that is often hard for other people to understand. As a psychotic disorder, schizophrenia involves a loss of contact with reality.

One of the most comprehensive and best known studies on the genetic vulnerability to schizophrenia was reported by American psychiatrist Irving Gottesman. Gottesman (1991) analysed the results of 40 widely regarded family and twin studies previously conducted by other researchers. The pool of data was vast, including one study of 4000 relatives and another of 3000 relatives.

Gottesman found that the greater the genetic similarity of relatives, the more likely they were to have been diagnosed with schizophrenia. For example, as shown in figure 12.5, identical twins (who share 100% of their genes) had a risk estimated at approximately 50%. This means that if one twin has schizophrenia, the other one will too in about 50 out of every 100 pairs of identical twins. By contrast, parents and their non-identical children are much less genetically alike than are identical twins. When data on parents and their offspring were analysed, it was found that if one parent has schizophrenia, there is a 17% chance of any of their biological children having schizophrenia.

Gottesman’s results provided compelling evidence for a genetic vulnerability to schizophrenia. Along with the results of numerous other subsequent studies by researchers throughout the world, Gottesman’s findings indicate that schizophrenia is partly genetic in origin. However, the risk is nowhere near as high as would be expected if the disorder was entirely genetic. For example, although the results of some twin studies show that if one identical twin has schizophrenia, the risk for the other twin is 50%, the same evidence suggests that 50% of the risk of developing schizophrenia is not accounted for by genetic factors. This means that other factors must also have a contributory role.

Psychologists have traditionally referred to these other factors collectively as ‘environmental factors’, with environment essentially meaning any non-genetically determined influence on the development of schizophrenia. Therefore, environmental factors as well as genes contribute to the development of schizophrenia. However, isolating the relative contribution of genetic and environmental factors is not a simple process since genes are always inherited and exert their influence in an environmental context.
Even with twin studies it is difficult to separate the effects of genes and the environment on schizophrenia because twins are usually raised together. Thus, when the child of a parent with schizophrenia develops schizophrenia, three explanations are possible:

- the mother or father may have genetically transmitted schizophrenia to the child
- the parent(s) with schizophrenia may have created an environment conducive to the onset of schizophrenia in other family members (e.g. an environment in which certain psychological and social factors are present)
- the child’s schizophrenia may have resulted from a combination of genetic factors and an environment conducive to the onset of schizophrenia.

Therefore, researchers have also conducted adoption studies to better understand the genetic predisposition to schizophrenia as well as the role of ‘environment’.

Adoption studies involve researching individuals born to a parent(s) with schizophrenia but who have been adopted shortly after birth and have therefore had no contact with the biological parent(s). This eliminates the possibility that being raised in an environment with a parent(s) with schizophrenia increases the likelihood of developing the disorder.

In one of the best-known adoption studies, American psychiatrist Seymour Kety and his colleagues (1988) traced through the records of childcare authorities and institutions. Of nearly 5500 adults who had been adopted early in life, the researchers identified 33 with schizophrenia. A control group of 33 participants was then selected from the same population. These participants were adoptees who were similar in age, sex and schooling to the individuals with schizophrenia, but who did not have schizophrenia.

Next, the researchers located 365 biological and adoptive relatives of these 66 adoptees, including both parents and siblings. The relatives were then separated into four groups: group 1 — biological relatives of adoptees with schizophrenia; group 2 — adoptive relatives of adoptees with schizophrenia; group 3 — biological relatives of adoptees without schizophrenia; and group 4 — adoptive relatives of adoptees without schizophrenia. Thirty-seven of the relatives were found to qualify for a diagnosis of either schizophrenia or another psychotic disorder. Most of these 37 relatives turned out to be the biological relatives of the adoptees with schizophrenia. Altogether, 14% of the biological relatives of the adoptees with schizophrenia were themselves also diagnosed with the disorder, whereas only 2.7% of their adoptive relatives were given this diagnosis. The biological and adoptive relatives of the adoptees without schizophrenia had schizophrenia prevalence rates of 3.4% and 5.5% respectively.

These results add to the substantial evidence supporting genetic vulnerability as a contributory factor in schizophrenia. Various other adoption studies have also provided considerable supporting evidence of the major role played by genes. Overall, adoption studies have consistently shown that if either biological parent of an individual had schizophrenia, the adopted individual is at greater risk to develop schizophrenia.

Researchers have since conducted twin and adoption studies to establish a genetic vulnerability for a range of other mental disorders, including anxiety disorders, mood disorders, personality disorders, substance-related disorders, addictive disorders, feeding and eating disorders, as well as mental disorders classified as neurodevelopmental (e.g. autism and ADHD) and neurocognitive (e.g. Alzheimer’s disease, Parkinson’s disease) (APA, 2013).

![Risk of developing schizophrenia (%)](image)

**FIGURE 12.5** Although having a genetic vulnerability increases the likelihood of developing schizophrenia, the risk depends on the degree of the biological relationship.

### LEARNING ACTIVITY 12.2

**Analysis of data**

Consider the data in figure 12.5 and answer the following questions.

1. What is the risk of a person developing schizophrenia if one of their biological parents has or has had the disorder?
2. What is the risk of a person developing schizophrenia if both of their biological parents have or have had the disorder?
3. (a) In what way do studies of people with varying genetic similarity provide evidence of a genetic vulnerability for schizophrenia? Explain with reference to data in figure 12.5.
   (b) In what way do the data in figure 12.5 also provide evidence for the role of non-biological contributory factors?
4. (a) In relation to schizophrenia, what is an adoption study?
   (b) Explain, with reference to the results, why the adoption study conducted by Kety and his colleagues (1988) provides evidence for some people having a genetic vulnerability for schizophrenia.
5. Explain why genetic vulnerability to a mental disorder does not mean causation.

### Poor response to medication due to genetic factors

Hundreds of different medications (‘drugs’) have been designed to treat mental health disorders. Called *psychotropic* medications, these are most commonly prescribed to complement other therapies as part of an overall treatment plan; for example, with psychotherapy and/or a relaxation technique. Generally, their use with psychotherapy helps ensure the effectiveness of that therapy, while also helping ensure the effectiveness of the medication. A therapist can monitor whether the medication is being used appropriately, as well as its effects on symptoms.

Psychotropic medications are primarily used to control onset or severity of targeted symptoms so that the individual can function more effectively. Although psychotropic medications may inhibit, alleviate or reduce symptoms, they do not cure the underlying condition.

Generally, psychotropic medications for mental disorders are as effective as medications used for physical disorders. For example, an anti-depressant is as likely to help someone suffering from depression as an antibiotic is to help someone with pneumonia. No medication in any field of medicine, including psychiatric medicine, is likely to work 100% of the time. In particular, psychotropic medications are not necessarily effective for everyone and not without side effects or risks. People are not the same, and not all people respond or react to the medications in the same way (Diamond, 2009).

Even when used appropriately, there remains a proportion of people who have a poor response to certain medications. Generally, a *poor response to medication* means having little to no reduction in the number or severity of symptoms despite taking medication as prescribed. For example, it is estimated that up to 45% of people with depression have a poor response to anti-depressant medications (Preskorn, 2014) and up to 50% of people who have had schizophrenia for more than two years are only partially responsive to anti-psychotic medications, while 5–10% of people get no benefit at all (Lambert & Castle, 2003; Pantelis & Lambert, 2003).

There may be a poor response to medication at any time in the development of any mental disorder; for example, when symptoms first appear and the disorder is not yet established or following onset when symptoms increase in number and/or severity. Consequently, a poor response to medication is considered a risk factor for both the development and progression of mental disorder.

There are a number of reasons why someone may have a poor response to medication. A significant biological factor involves genetics. Research studies have found that some genes are responsible for how our body processes medications and that genetic variations can cause different people to respond in different ways to the same medication. For example, variations in genes may affect the absorption, distribution, metabolism or elimination of a particular medication. Therefore, because of their genetic makeup, some people may not respond well, if at all, to a medication designed and prescribed for their specific mental disorder (Belle & Singh, 2008; National Institute of Health, 2013).

For example, someone’s body may metabolise (‘break down’) a particular psychotropic medication too slowly. The medication may then build up in the body, causing severe side effects. Someone else’s body may metabolise the same medication too quickly, reducing or eliminating it before it has a chance to work effectively. And yet another person may be genetically predisposed to having significant and undesirable side effects from a medication, for example, because of the presence of too much or too little of the neurotransmitter or receptors targeted by the medication.

Although genetic variants may have a significant impact on the metabolism of a specific drug, they do not work in a vacuum. An individual’s response to medication can also be affected by other biological factors such as age, sex, body weight, race, receptor sensitivity, diet and other co-existing disorders the individual may have or other drugs or substances they might be using. There are also psychological and social factors that can affect responsiveness to medication (see box 12.1).

Given that a person’s response to medication may be influenced by genetic factors, some researchers are devising genetic tests that could be used to measure an individual’s responsiveness to a specific
psychotropic medication before they start taking it. For example, preliminary studies of people with schizophrenia indicate that DNA testing of the gene for a specific receptor for the neurotransmitter serotonin can predict their likely response to antipsychotic drugs. A similar form of gene testing is being devised to measure responsiveness to various antidepressant and anti-anxiety medications (National Institute of Health, 2013; Preskorn, 2014).

**FIGURE 12.6** Hundreds of different medications have been designed to treat mental disorders, but some people have a poor response to medication due to genetic factors. The study of how genes affect the way a person responds to medications is called pharmacogenetics or pharmacogenomics.

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**BOX 12.1**

**Other reasons why there may be a poor response to a psychotropic medication**

According to American psychiatrist and expert in psychopharmacology Ronald Diamond (2009), there are a number of reasons that should be considered if a prescribed psychotropic medication does not work.

- **Is the diagnosis correct?** The medication is unlikely to work if the wrong disorder is being treated. For example, correcting someone’s biological predisposition to depression is less likely to be effective if the person is being overwhelmed by social stressors.

- **Has a physical illness gone unrecognised?** It is estimated that 10% of people diagnosed with a mental disorder have unrecognised physical illnesses that are causing or contributing to their disorder.

- **Is substance abuse interfering?** Many of the symptoms common among a wide range of mental disorders can be caused, or made worse, by alcohol, stimulants, or other drugs.

- **Is the person taking the medication?** It has been estimated that half of all people with a diagnosed mental disorder do not take medications as prescribed. A medication is unlikely to work if it is not being taken, or not being taken correctly.

- **Has the dose been high enough for a long enough period of time?** Almost all of the psychotropic medications take days to weeks to be effective. Some medications, such as clozapine (for schizophrenia), can take months. Too often people quit taking the medication before it has had a chance to work. Many people who are labelled ‘nonresponders’ go from one medication to another without giving any of them enough time to see if they would be effective. In other cases, a person will have stayed on a medication long enough but at such a low dose that it is unlikely to help.

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**FIGURE 12.7** There are many possible reasons why some people have a poor response to psychotropic medication.
LEARNING ACTIVITY 12.3

Reflection
When prescribing a psychotropic medication, a doctor or psychiatrist tends to start with a standard dose then monitor how the patient responds, which is like a ‘trial and error’ process. In the future, it may be possible to use a patient’s genetic profile to determine the best medication and the optimal dose. What three ethical issues would be of particular relevance when this occurs?

Poor sleep
Poor sleep quantity or quality is associated with a range of mental disorders. These include mood disorders, anxiety disorders, addictive disorders, personality disorders, schizophrenia and other psychotic disorders. For example, difficulty in falling or staying asleep (which produces poor sleep) is one of the diagnostic criteria for posttraumatic stress disorder, acute stress disorder, generalised anxiety disorder and depression (AASM, 2014a; APA, 2013; Gruber et al, 2014).

A significant number of people with these types of mental disorders report poor sleep prior to its onset and/or following onset or diagnoses. Consequently, poor sleep is considered a risk factor for the development or progression of certain mental disorders.

Although it is clear that poor sleep can precede the development of the symptoms that typify a disorder in a way that enables it to be distinguished from others, the relationship between poor sleep and mental disorders is commonly described as bi-directional, or ‘two-way’. This means that poor sleep may contribute to or cause a mental disorder, or that a mental disorder may be the cause of poor sleep. This is a complex relationship that can make it difficult to isolate cause from effect. For example, some people with depression experience its symptoms before the onset of sleep problems, whereas sleep problems appear first with others (Alvaro, Roberts & Harris, 2013; NSF, 2016k).

Insomnia is very common among people of all ages with depression. They may suffer from a range of insomnia symptoms, including difficulty falling asleep (sleep onset insomnia), difficulty staying asleep (sleep maintenance insomnia), unrefreshing sleep, and daytime sleepiness. There is research evidence that people with insomnia have as much as a ten-fold risk of developing depression compared with those who sleep well. The risk of developing depression tends to be highest among people who experience both sleep onset and sleep maintenance insomnia (Baglioni, et al., 2011; NSF, 2016k; Taylor, et al, 2005).

Of course, poor sleep is also associated with many other mental disorders, but cause and effect can also be difficult to separate in relation to these disorders. For example, poor sleep and anxiety disorders share a close relationship. Many people with anxiety disorders get poor sleep from sleep-onset insomnia due to anxiety about not being able to fall asleep or to have as much sleep as desired. Poor sleep may then worsen existing symptoms and contribute to problems associated with the disorder.

Similarly, a person with schizophrenia is also likely to have poor sleep, especially before and during a psychotic episode. They typically take longer to go to sleep, awaken more frequently and get less sleep per night. And people with obsessive compulsive disorder may associate going to bed with a series of elaborate and unusual bedtime rituals (such as rearranging all the soft toys in their room or repeatedly checking that all the doors in their house are locked). These rituals can significantly delay going to sleep. Once asleep they may wake quite often and get less deep sleep (Bruck, 2006).

Poor sleep due to obstructive sleep apnoea is also strongly linked with depression. For example, researchers have found that people with depression are five times more likely to suffer from a sleep-related breathing disorder that causes poor sleep. There are also higher rates of depression and poor sleep among older adults, but these may be explained in part by age-related factors, which highlights the complexity of the relationship between poor sleep and depression (NSF, 2016k).

Figure 12.8 Poor sleep and depression often occur at the same time. Research studies have found that most people with depression have poor sleep and that people with sleep problems that cause poor sleep are more vulnerable to developing depression.
Substance use

Substance use is also considered a biological risk factor for mental disorder. Substance use refers to the use or consumption of legal or illegal drugs or other products. This may include alcohol, tobacco, prescription drugs, over-the-counter drugs or illegal drugs. In some cases, the active ingredients of the substance may directly contribute to the development or progression of a disorder.

As with poor sleep, substance use and mental disorders often occur together. There is a high prevalence of this co-existence in relation to a wide range of substances and disorders. Furthermore, people with a mental disorder experience substance use problems at far higher rates than the general population.

For example, studies have found that individuals diagnosed with mood or anxiety disorders are about twice as likely to suffer also from a substance use disorder (involving abuse or dependence) compared with people in the general population. Similarly, people with schizophrenia have higher rates of tobacco, alcohol and other substance use or abuse than the general population. For example, some studies have found that the rate of smoking among people with schizophrenia can be as high as 90%, especially in samples of people hospitalised for treatment. People with schizophrenia are also more likely to use cannabis, and in greater quantities, than the general population. For example, one study found that almost 30% of people with schizophrenia had used cannabis in the 12-month period preceding the study and about 20% did so heavily. Cannabis use has also been strongly linked to other psychotic disorders, mood disorders and anxiety disorders, especially if family history suggests a genetic vulnerability to the disorder (ADF, 2015b; Green, Young & Kavanagh, 2005; National Institute of Drug Abuse (NIDA), 2010).

The reverse is also true, suggesting a bi-directional relationship between substance use and mental disorder. There is considerable research evidence that people who regularly use or abuse drugs or other substances are at a higher risk of developing a diagnosable mental disorder. For example, a person diagnosed with a substance use disorder is about twice as likely to suffer also from a mood or anxiety disorder. Similarly, one Australian study found regular cannabis use increases the risk of experiencing psychotic symptoms to a one in five chance (ADF, 2013; Large, et al., 2011; NIDA, 2010).

As with poor sleep and mental disorders, the high prevalence of co-existence between substance use issues and mental disorders does not necessarily mean that one caused the other, even if one appeared first. Establishing causality or what occurred first — the problematic substance use or the mental disorder — is difficult. The reasons a person may experience both problematic substance use and a mental disorder vary between individuals (ADF, 2013). It may be that the person's symptoms prompt substance use or that the substance use is due to the mental disorder, or a combination of both. For example, someone developing or with a mental disorder may use a substance as a form of self-medication in an attempt to alleviate anxiety, stress reactions, poor sleep or other specific symptoms. In addition, they may gravitate towards the substance that best mediates their particular symptoms. For example, the use of tobacco products by people with schizophrenia is believed to lessen the symptoms of the disorder and improve cognition. Similarly, a person with social phobia may use alcohol to help feel more comfortable in social situations and a person with depression who is lethargic and unmotivated may use stimulants to increase their drive to get things done.

Establishing causality or what occurred first is also potentially complicated by a third set of issues such as work or relationship difficulties that have contributed to the development of the mental disorder, the substance use or both. Furthermore, imperfect recollections of when substance use or abuse started by people with mental disorders can also make it difficult to determine which came first (ADF, 2013; NIDA, 2010).
LEARNING ACTIVITY 12.4

Review questions

1 Complete the following table to summarise biological risk factors for mental health disorder.

<table>
<thead>
<tr>
<th>Biological risk factor</th>
<th>Description of risk factor</th>
<th>Example</th>
<th>Explanation of the risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>genetic vulnerability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>poor response to medication due to genetic factors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>poor sleep</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>substance use</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2 (a) What feature primarily distinguishes biological risk factors from other types of risk factors?
(b) Explain whether all biological influences on thought, feelings or behaviour are necessarily due to genetics or inheritance.

3 Explain the meaning of a bi-directional relationship between risk factor (such as poor sleep or substance use) and mental disorder.

4 (a) Why is it difficult to determine cause–effect when a risk factor and mental disorder coexist?
(b) Give an example of a research method that could be used to identify whether a risk factor or mental disorder occurs first.

5 To what extent can the impact of biological risk factors be controlled?

PSYCHOLOGICAL RISK FACTORS

Psychological risk factors for mental disorders either originate or develop within the mind, which means there is often the potential to exert some control over their occurrence or influence. In this section we examine four examples of psychological risk factors — rumination, impaired reasoning and memory, stress and poor self-efficacy.

Rumination

Rumination involves repeatedly thinking about or dwelling on undesirable thoughts and feelings, such as problems or bad moods, without acting to change them. When we ruminate, we continuously think about aspects of negative situations that are upsetting, such as their causes or potential consequences, but do nothing to change anything. Think about your own tendencies when dealing with a disturbing problem or issue. When something upsets you, do you tend to mull on it, and keep going over the problem again and again? Do you dwell on why you feel bad and often express to others how bad you feel? If so, then you may be a ruminator (Nolen-Hoeksema, Parker & Larson, 1994; Selby, 2010).

According to American psychologist Edward Selby (2010), rumination is a risk factor for developing a mental disorder because it impedes problem solving, often to the extent that a person cannot see a way of overcoming or minimising the impact of whatever is upsetting them. People who ruminate tend to take problem-solving too far and for too long. They will often spend hours analysing the situation, even after they’ve developed a plan for dealing with the situation. Sometimes people will ruminate about the problem so much that they never even develop a solution to the problem. This is when rumination heightens the risk of mental disorder. For example, if a situation is upsetting, then it is likely that the person will remain upset for as long as they ruminate.

FIGURE 12.11 People who ruminate are much more likely to develop problems with depression and anxiety.
American psychologist Susan Nolen-Hoeksema and her colleagues have studied rumination extensively and have found that rumination is a significant risk factor for the development of depression in particular. In addition, rumination can increase the severity of depression and impede recovery. She describes rumination as a kind of negative thinking that not only prolongs an undesirable mood or worsens depression, but it impedes problem-solving and successful mood-changing strategies, such as distraction, that can blunt the emotional effects of problems, disappointments and setbacks. In one study of people who lost a loved one to terminal illness, it was found that those who ruminated around the time of their loss had higher levels of depressive symptoms over the 18 months after their loss than those who didn’t ruminate (Nolen-Hoeksema, Parker & Larson, 1994).

When people are sad or upset, it seems reasonable to try to think through their problems and take the time to do so. However, studies have shown that when people ruminate in the context of a low mood, they recall more negative memories from the past, interpret their current situation more negatively, and are more pessimistic and hopeless about their future. In addition, when rumination is focused on negative or unproductive thoughts, it can make someone a poorer problem-solver, not a better one. Therefore, rumination may prolong and enhance the negative thinking associated with a low mood and interfere with good problem solving. These processes may cause a low mood to evolve into a major depressive episode (Nolen-Hoeksema, 2000; Papageorgiou & Wells, 2001; Watkins & Baracaia, 2002).

![Figure 12.12](image.jpg)

**Figure 12.12** Many activities can be used to distract from rumination and the best one to use depends on the personal preferences of the individual. For example, some potentially effective activities include reading a book, playing a game, exercising, talking to a friend (but not about the problem!), or watching a movie (Selby, 2010).

**Learning Activity 12.5**

**Reflection**

Comment on whether rumination is best avoided altogether.
Impaired reasoning and memory

Impaired reasoning and memory are two of the many cognitive problems that can contribute to the development and progression of mental disorders. These problems may be evident before the onset of other symptoms, which suggests they can contribute to the development of a disorder. They are also evident among people with different types of mental disorders, which emphasises a possible role in perpetuating a disorder. For example, many people with anxiety disorders, psychotic disorders, mood disorders or personality disorders commonly demonstrate impaired reasoning through their distorted and maladaptive ways of thinking. Similarly, there are times when they may forget what they are doing in the middle of doing something, forget appointments and conversations, or have difficulty learning new skills because of memory impairments.

Impaired reasoning and memory have been studied extensively in relation to schizophrenia because of their prevalence among people with the disorder. It is estimated that as many as 85% of people with schizophrenia experience these types of cognitive problems. Furthermore, they tend to be evident regardless of the level of intelligence, educational background, age, sex or occupation of the person and other relevant sociocultural factors (Medalia & Revheim, 2002).

Impaired reasoning

Reasoning involves goal-directed thinking in which inferences are made or conclusions are drawn from known or assumed facts or pieces of information. When we are engaged in reasoning, we use what we already know or assume to be true and draw conclusions we believe to be correct or that best suit the available information. Reasoning enables us to solve problems, thereby allowing us to deal with the challenges we meet in everyday life.

Research findings indicate that impairments of varying degrees are evident in many specific types of reasoning among individuals with schizophrenia. We consider an example of impaired reasoning involving ‘jumping to conclusions’ when using probabilistic reasoning.

Probabilistic reasoning involves making judgments related to probability, or the likelihood of something happening or being true. This is a type of reasoning we engage in nearly every day. For example, you may find yourself wondering how likely it is to rain tomorrow, whether the fact that you have sneezed three times in the last 10 minutes means you are getting a cold, or how likely it is that you will bump into a friend if you go to the local shopping centre on Friday night.

Research evidence suggests that people with schizophrenia often have an impairment in probabilistic reasoning that affects how they interpret social situations. This type of reasoning impairment has also been implicated as a contributing factor in the development and persistence of the delusions associated with schizophrenia and other psychotic disorders. A delusion is a fixed, false belief that is held with absolute certainty, even when there is strong factual evidence against it. For example, someone may believe, regardless of whatever they are told or shown, that scientists are trying to poison them with radioactive particles delivered through their tap water. Delusions are a key symptom of schizophrenia, occurring in approximately three-quarters of cases, and have been consistently shown by research evidence to be associated with reduced data gathering, belief inflexibility and an impaired working memory (Broome, et al., 2007).

British psychologists Phillipa Garety and David Hemsley and psychiatrist Simon Wessely (1991) conducted one of the best-known studies providing evidence that individuals experiencing delusions are likely have a probabilistic reasoning impairment (see box 12.3). This impairment is a type of cognitive bias, or tendency to process information in a particular way, called ‘jumping to conclusions’.

As the term suggests, jumping to conclusions involves making hasty judgments or decisions on the basis of inadequate or ambiguous information, typically resulting in unjustifiable or incorrect conclusions. Usually there is more information available than is actually used and the conclusion is reached without accessing the additional information that may have resulted in a different or accurate conclusion. When judgments and decisions are reached in this way, the person with schizophrenia usually holds them with greater confidence and inflexibility than others would. People experiencing delusional beliefs tend to reach unwarranted conclusions about the causes of events very quickly, do so on the basis of reduced data-gathering and stick to the first explanation for an event that comes to mind.

![Low res](image-url)

**FIGURE 12.13** Impaired reasoning may be evident in a person with schizophrenia who hears an approaching helicopter and immediately jumps to a conclusion that the prime minister is on board and coming to visit.
The beads task

British psychologist Phillipa Garety and her colleagues (1991) obtained evidence for a probabilistic reasoning impairment among people with delusions in an experiment in which four groups of participants were used. There were two groups of participants who had reported experiencing delusions (N=27) and two control groups (N=27). The groups were organised as follows:

- group 1 — 13 participants with schizophrenia (and who reported experiencing delusions)
- group 2 — 14 participants with delusional disorders
- group 3 — 14 participants with a diagnosable anxiety disorder
- group 4 — 13 participants with no history of psychiatric treatment (referred to a ‘normal controls’).

Participants with schizophrenia were selected from both inpatients and outpatients at a psychiatric hospital. The ‘normal control’ participants were selected from nursing and clerical staff at the hospital. All participants in the ‘anxious control’ group were receiving treatment of some kind for their disorder, such as medication or psychological therapy.

The groups were compared on a test of probabilistic reasoning. The test, known as the ‘beads task’, is commonly used in research on probabilistic reasoning.

In a typical ‘beads task’, two jars are used, each with 100 beads of two different colours. One jar contains a higher proportion of beads of one colour (e.g. 85 red and 15 blue) and the other contains the reverse (85 blue and 15 red). Participants are informed of the proportions, then both jars are removed from view. One of the jars is then chosen, still hidden from view, and a bead is drawn from it and shown to the participant. The experiment is continued, with beads being drawn sequentially and always replaced. Although the participants are told that beads are being selected randomly, the sequence of colours is predetermined according to the ratio of the two colours.

The participant’s task is to work out which jar the experimenter is drawing a bead from. After each bead is drawn, participants are asked if they would like to see more beads (i.e. if they would like more information) or if they can say, with certainty, from which of the jars the beads are being drawn. The dependent variable is the number of beads drawn before making a decision.

Garety and her colleagues found that participants who experienced delusions (groups 1 and 2) requested significantly less information before reaching a decision on the reasoning task than did both non-deluded psychiatric participants (group 3) and normal control participants (group 4). Furthermore, 11 (41%) of the participants who experienced delusions (groups 1 and 2) reached a firm decision (with 85% certainty) as to the identity of the jar after the very first bead was presented, compared with only one (3%) participant in the control conditions (groups 3 and 4).

These findings have been replicated by many other studies. For example, a recent study by a team of Australian psychologists compared 35 people with schizophrenia (and a history of delusions) with 34 ‘healthy’ controls on the beads task. The results revealed that while four people from the control group (11.8%) reached a decision after only one draw, the proportion of people with schizophrenia doing so was significantly greater (34.3%) (Langdon, Ward & Coltheart, 2010).

Learning Activity 12.6

Analysis of research by Garety, Hemsley and Wessely (1991)

Evaluate the experiment on probabilistic reasoning conducted by Garety, Hemsley and Wessely (1991) in box 12.3. Answer the following questions.

1. What was the aim of the research?
2. Construct a relevant research hypothesis that could have been tested by procedures.
3. Identify the research sample and its population.
4. Name the type of experimental design.
5. (a) Identify the experimental and control conditions. (b) Why might the researchers have used two control groups?
6. Identify the operationalised independent and dependent variables.
7. Explain whether the results support the hypothesis.
8. What is a possible limitation of the results? Explain your answer.
**Impaired memory**

Researchers have found that impairments in memory are associated with a range of mental disorders. As shown in table 12.3, these impairments may be in different types of explicit and implicit long-term memories, as well as in short-term (working) memory. The most pervasive memory impairments are evident in schizophrenia.

Research studies have established that people with schizophrenia usually have some degree of memory impairment and tend to perform poorly on a wide range of memory tasks. In order to determine the extent and pattern of memory impairment in schizophrenia, American psychologist André Aleman (1999) analysed the results of 70 research studies on memory impairment which compared the performance of people diagnosed with schizophrenia with the performance of a control group of ‘healthy normal’ participants. The results revealed memory impairment to be wide-ranging in people with schizophrenia, with significant impairments of both short-term (working) memory and long-term memory.

More recent studies have focused on impairments of different types of long-term memory. Although both explicit and implicit long-term memories are impaired, episodic memories of past events and personal experiences tend to show the greatest loss. For example, when they read a story, people with schizophrenia learn and recall much less of the details than control group participants. If the story is repeated, they gain less information from repeated exposure than control group participants, showing a reduced learning and retention. In other studies of episodic memory, participants may be required to recall specific information about past events they have experienced. The researchers then verify the accuracy of the information by checking with relatives and friends. These studies have also found that people with schizophrenia tend to make more errors or omissions than control group participants (Danion, et al., 2007; Harvey & Sharma, 2002). Furthermore, a study by a team of Australian researchers found that episodic memory impairment also tends to be present before the presence of obvious psychotic symptoms (Brewer, et al., 2006).

Impairments in episodic memory can be very disabling. Individuals with episodic memory impairment may experience difficulties recalling their personal histories with reference to events, times, places and even the emotions they felt during events. For example, they may not be able to remember what they did yesterday and where they left their house keys earlier in the day.

People with an episodic memory impairment may also lose the ability to associate themselves with personally significant past events or plan for the future on the basis of past experiences. In cases of severe episodic memory impairment, they can become ‘trapped in the present’. Along with other impairments of memory and reasoning, episodic memory impairment contributes to some of the key symptoms associated with schizophrenia, particularly disorganised behaviour and the impairments apparent in day-to-day functioning.

**TABLE 12.3** Some memory impairments occurring with various mental disorders

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Short-term (working) memory</th>
<th>Episodic memory</th>
<th>Semantic memory</th>
<th>Visual memory</th>
<th>Verbal memory</th>
<th>Procedural memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major depressive disorder</td>
<td>++</td>
<td>++</td>
<td></td>
<td></td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+++</td>
<td></td>
</tr>
<tr>
<td>Autism Spectrum Disorder</td>
<td>++</td>
<td>++</td>
<td></td>
<td></td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>++</td>
<td>++</td>
<td></td>
<td></td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Obsessive Compulsive Disorder</td>
<td>++</td>
<td>++</td>
<td></td>
<td></td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Posttraumatic Stress Disorder</td>
<td>++</td>
<td>++</td>
<td></td>
<td></td>
<td>++</td>
<td></td>
</tr>
</tbody>
</table>

Key: ++, a common marked characteristic; +++ a core, severe and virtually universal characteristic of the disorder.

Stress

Stress has long been recognised as a risk factor for the development and progression of a mental disorder. For example, in the 1960s two British psychiatrists found that 50% of the participants who had been diagnosed with schizophrenia had experienced at least one major, stressful life event at some time during the three weeks before their diagnosis (Brown & Birley, 1968). This finding influenced other researchers to investigate the role of stress in schizophrenia and it was found to play a potentially significant role. A number of models were also devised to explain its role; in particular, how stress contributes to the onset and course of schizophrenia.

The most influential model emphasised how stress increased vulnerability to the development of schizophrenia. The model has since been applied to other major mental disorders. Although there are now different versions of the model, they tend to have the same basic structure, but vary in the emphasis given to different elements.

Generally, the stress-vulnerability model explains why some people may develop a mental disorder when they experience stress and others do not. According to the stress-vulnerability model, all people have some level of vulnerability for any given mental disorder and the risk of developing the disorder varies in relation to the combined effect of an individual’s level of vulnerability, the level of stress that is experienced and their ability to cope. The level of stress may be influenced by a single stressor or the combined effect of a number of stressors. Furthermore, depending on coping skills, individuals with a higher level of vulnerability are more likely to develop a mental disorder in response to a lower level of stress than will someone with a lower vulnerability (who is likely to require a higher level of stress to develop a disorder).

In terms of this model, vulnerability is a predisposition that increases the likelihood of developing a specific mental disorder. Because possessing vulnerability places someone at a higher risk for developing a disorder, it is sometimes described as a sub-category of a risk. In addition, the earlier versions of the model tended to consider vulnerability as genetic (e.g. having a family history of mental disorder), but contemporary versions tend to allow for other biological vulnerabilities (e.g. infection during pregnancy, birth trauma, neurodevelopmental disorders) as well as psychological and social vulnerabilities.

The Mental Illness Fellowship of Victoria (2013) has devised a contemporary version of the stress-vulnerability model to incorporate risk and protective factors within a biopsychosocial framework.

According to this version, risk factors make it more likely that mental disorder symptoms will emerge and protective factors that make it less likely that symptoms will emerge. Both risk and protective factors may include aspects of a person’s biology (biological factors), personal attributes (psychological factors), and/or environment (social factors). Consistent with the biopsychosocial model, it is the interaction of these risk and protective factors that influence the likelihood of symptoms occurring in a vulnerable person.

As shown in figure 12.15, stressors are incorporated as social factors. An individual’s stress reaction has also been included, taking account of the effects on the body (biological risk factor) and the mind (psychological factor). It is emphasised that none of the risk factors, including stress, should be considered the ‘whole cause’ of a mental disorder. When a person has a number of risk factors then that person is more vulnerable to mental disorder and when someone has all possible risk factors, there is still only a 40% chance that they will develop mental disorder. In addition, protective factors do not only safeguard against the onset of a mental disorder, they also assist recovery and minimise relapse.

**FIGURE 12.15** An example of a stress-vulnerability model that incorporates risk and protective factors within a biopsychosocial framework


Recognising possible triggers of mental illness onset or relapse: The stress-vulnerability-coping model of mental illness.

<table>
<thead>
<tr>
<th>Protective factors</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological (e.g. medication compliance, no family history of the disorder, good physical health); psychological (e.g. good coping skills, good communications skills, high self-esteem); social (e.g. strong family relationships, access to social support, use of psychotherapy if appropriate)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological (e.g. family history of the disorder, problems in the development of the brain, physiological response to stress); psychological (e.g. psychological response to stress, poor coping skills, poor social skills); social (e.g. stressful relationships, major life events, low social support)</td>
<td></td>
</tr>
</tbody>
</table>

16 UNIT 4 How is wellbeing developed and maintained?
**Poor self-efficacy**

How do you view your ability to select, influence and control the circumstances of your life? If you have a strong sense of self-efficacy, you believe you can generally succeed, regardless of past failures and current obstacles. **Self-efficacy** refers to an individual’s belief in their capacity to execute behaviours necessary to succeed in a specific situation or accomplish a specific task. It is essentially a feeling of competence on which we base our expectation of success in various situations we encounter in everyday life. This also influences the challenges we accept and the effort we may expend in achieving a goal. For example, if you have a strong sense of self-efficacy, you are more likely to approach a difficult task as a challenge to be mastered. You are also likely to exert strong motivational effort, persist in the face of obstacles and find ways of overcoming them in order to succeed.

The concept of self-efficacy was originally proposed by Albert Bandura (1977b, 1986) as part of his social learning theory. Bandura described it as specific to a situation and therefore not transferable to all areas of life. It is a state of mind that varies from one specific task or situation to another. For example, a business executive may have a strong sense of self-efficacy in terms of their organisational abilities but have poor self-efficacy in terms of their parenting abilities. Similarly, self-defence training may have a significant effect on improving your belief to deal with a potential assailant, but this increased self-efficacy about your ability to fight off or escape from a dangerous person does not necessarily transfer to other areas of your life. For example, it will not significantly increase your self-efficacy about your ability to snowboard, write an essay or to do well on an end-of-year exam.

Self-efficacy may seem to be the same as self-esteem but they are considered different concepts. **Self-esteem** refers to our overall feeling of self-worth. By contrast, self-efficacy is not concerned with the global perspective of what a person thinks about themselves. Instead, it is about the perception or judgment of being able to accomplish certain tasks. In sum, self-esteem is a judgment of self-worth, whereas self-efficacy is a judgment of capability.

According to Bandura (1977b), self-efficacy is a product of learning through experience, either directly through personal engagement or indirectly through observing other people’s performances (i.e. vicariously). The more we experience success on a task, the more likely we are to feel competent and perform well on that task (or a very similar task). Performing a task successfully therefore strengthens a person’s sense of self-efficacy. Conversely, failing to adequately deal with a task or challenge can undermine or weaken self-efficacy.

Self-efficacy affects how vulnerable a person is to experiencing stress, anxiety and depression, with poor self-efficacy increasing the chance of developing a disorder and impairing our ability to overcome challenges that arise when we experience difficulties. For example, people with poor self-efficacy who believe that potential stressors are unmanageable tend to view many aspects of their environment as dangerous and unsafe. They tend to dwell on their inability to cope, magnify the severity of possible threats and worry about things that rarely happen. By contrast, people who believe they can successfully cope with potential stressors are less affected by them (Bandura, 1988; Maciejewski, Prigerson & Mazure (2000).
Self-efficacy can also contribute to the development of anxiety disorders or depression through 'thought control efficacy'. Bandura describes this as how much control a person believes they have over their ruminative, negative and disturbing thoughts. According to Bandura (1991), it is not the frequency of a person's ruminative thoughts that causes anxiety or depression, but rather, it is their perceived inability to 'turn them off' that is the major source of distress. Therefore, people with poor self-efficacy about their ability to control or 'turn off' ruminative, negative and disturbing thoughts are more likely to experience anxiety or depression than those with high self-efficacy about this ability.

Bandura (1995) also linked poor self-efficacy to a person's functioning and emotional well-being. He proposes that people with poor self-efficacy tend to shy away from difficult tasks as they view them as personal threats. They are also likely to have low aspirations and weak commitment to the goals they choose to pursue. When faced with difficult tasks, they are likely to dwell on their personal deficiencies, the obstacles they will encounter and all kinds of adverse outcomes, instead of concentrating on how to perform successfully. Furthermore, people with poor self-efficacy tend to slacken their efforts and give up quickly in the face of difficulties. They are also slow to recover their sense of efficacy following failure or setbacks. And because they tend to view bad performance as being due to their lack of ability or competence, it does not require much failure for them to lose faith in their capabilities. They are consequently more vulnerable to experiencing stress, anxiety and depression.

**LEARNING ACTIVITY 12.7**

**Review questions**

1. Complete the following table to summarise psychological risk factors for mental health disorder.

<table>
<thead>
<tr>
<th>Psychological risk factor</th>
<th>Description of risk factor</th>
<th>Example</th>
<th>Explanation of the risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>rumination</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>impaired reasoning and memory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>poor self-efficacy</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. In what ways is rumination like and unlike worrying?
3. (a) Give an example of a reasoning or memory impairment that could be associated with either depression or an anxiety disorder (e.g., phobia).
   (b) Explain how this impairment could contribute to the development or progression of the disorder.
4. What feature primarily distinguishes psychological risk factors from other types of risk factors?
5. (a) To what extent may each of the psychological risk factors co-exist with a mental disorder?
   (b) What does this suggest about cause-effect for each factor?
6. To what extent can the impact of psychological risk factors be controlled?

**LEARNING ACTIVITY 12.8**

**Reflection**

Describe a situation in which high self-efficacy enabled you to overcome one or more obstacles and succeed.
SOCIAL RISK FACTORS

Social risk factors for mental disorders originate in the external environment and interact with biological and psychological factors in influencing our mental health state. In this section, we examine the possible influence of disorganised attachment, loss of a significant relationship and the role of stigma on the development and progression of mental disorders.

Disorganised attachment

Attachment is a relationship between two people in which each person feels strongly about the other. In relation to human development, attachment refers to the emotional bond which forms between an infant and another person, usually the primary caregiver such as their mother and father. Infants are also capable of developing different and separate attachments with other people who have significant involvement in their lives, for example, an older sibling, a grandparent or a childcare worker at a daycare centre where they may spend time.

Attachment can vary in terms of how strong the connection is and the kind of connection. The strength of each attachment also depends on a large extent on how sensitive and responsive the primary caregiver is to the infant's needs. The infant's responsiveness is also a factor in the nature and type of attachment that is formed.

The pattern of thoughts, feelings and behaviour associated with each type of attachment tends not to change over time unless there are significant changes in life circumstances for either the caregiver or the infant. If the caregiver substantially changes the way in which they interact with the infant, particularly the way in which they respond to the infant's expressed needs, then the nature of the attachment may change (Ainsworth, 1982). Given the importance and durability of an attachment relationship, an unhealthy attachment formed early in life is considered a risk factor for the development and progression of mental health disorder.

When an infant has a secure, healthy attachment, the parent (or other primary caregiver) provides a secure base from which the infant can venture out and independently explore their environment, knowing that they will always return to a safe place. The parent is a source of comfort and positive feelings. If the parent returns after absence, the infant is enthusiastic and seeks close physical contact with them. Securely attached infants feel safe, loved and confident that their parent(s) will provide care and support when required. Adults who formed secure attachments as infants tend to have good self-esteem, seek social support when they need it, have trusting, lasting relationships and are comfortable sharing feelings with their friends and partners (Ainsworth, et al., 1982; Bachman & Zakahi, 2000).

When a parent (or other primary caregiver) is continually neglectful or abusive in other ways, even if unintentional, the infant may experience fear or feel threatened. Although the attachment figure may provide care at various times, they are also a source of distress because they are 'scary'. Fear can create a need for 'flight', but care is also provided from the very person who is frightening. This dilemma can be unsettling and confusing. It is likely that there will often be apprehension about approaching the person when care or comfort is needed because their reaction can be unpredictable. In these conditions, some infants and children disassociate, as if withdrawing or disconnecting from their inner self. They may also feel detached from what's happening to them. What they're experiencing may be blocked from their consciousness. When an infant or child is in this conflicted state, they have developed a disorganised attachment with their primary caregiver(s) (Firestone, 2016; Main & Solomon, 1986).

Disorganised attachment is a type of attachment that is characterised by inconsistent or contradictory behaviour patterns in the presence of a primary caregiver. For example, when reunited with a caregiver following a period of separation, a child with a disorganised attachment typically expresses odd or ambivalent behaviour toward them. When seeking close contact, they may do so by moving slowly towards the caregiver or approach with their head turned in another direction as if avoiding eye contact. In some cases, they may impulsively start to run up to the caregiver, then immediately pull away. Infants who have formed a disorganised attachment also tend to respond to reunions with their caregiver with fearful or odd behaviours such as rocking themselves, ear pulling, 'freezing' or going into a trance-like state. They tend to lack organised strategies for achieving physical proximity with a caregiver, particularly when distressed or frightened (Main & Solomon, 1986; 1990).

In 1986 American psychologists Mary Main and Judith Solomon identified the disorganised attachment type and formally called it disorganized/disoriented attachment. It is now commonly referred to more simply as disorganised attachment. Table 12.4 summarises behavioural characteristics that may indicate disorganised attachment.

TABLE 12.4 Indices of disorganisation/disorientation

<table>
<thead>
<tr>
<th>Indice</th>
<th>Behavioural characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Sequential display of contradictory behaviour patterns</td>
</tr>
<tr>
<td>II</td>
<td>Simultaneous display of contradictory behaviour patterns</td>
</tr>
<tr>
<td>III</td>
<td>Undirected, misdirected, incomplete, and interrupted movements</td>
</tr>
<tr>
<td>IV</td>
<td>Stereotypies, asymmetrical movements, mistimed movements, and anomalous postures</td>
</tr>
<tr>
<td>V</td>
<td>Freezing, stilling, and slowed movements and expressions</td>
</tr>
<tr>
<td>VI</td>
<td>Direct indices of apprehension regarding the parent</td>
</tr>
<tr>
<td>VII</td>
<td>Direct indices of disorganisation or disorientation</td>
</tr>
</tbody>
</table>

Source: Main & Solomon (1990)
Researchers who investigated early life experiences associated with disorganised attachment have linked it to factors such as abuse, hostile caregiving, unresponsive caregiving, post-natal depression and the mother having an unresolved trauma or experienced loss through separation, divorce and death. However, research studies have also found disorganised attachment among infants in families where none of these variables is evident and the ‘middle-class family’ lifestyle appears ‘normal’. So, psychologically inappropriate parenting practices do not fully explain disorganised attachment in an infant. The origins of this attachment type seem to be highly complex and much research remains to be done (Meins, 2011).

Disorganised attachment is not considered to be a mental disorder, but it is considered a social risk factor for the development and progression of mental health disorder. There is considerable research evidence that the attachment(s) formed during infancy, particularly in the first 12 months of life, influences the individual’s socio-emotional development, both in the short term and into adulthood.

For example, a secure and therefore healthy attachment is linked to the development of trust and security, whereas disorganised attachment can result in anxiety and inner turmoil that become risk factors for developing a mental disorder. Individual differences in emotional intelligence between children of the same age have also been linked to different attachment types. Children who have formed a healthy attachment tend to be more skilled in reading and interpreting emotions in others (e.g. from facial expressions) when compared to children with a disorganised attachment. Similarly, children with secure attachments tend to have more emotional control, to be more emotionally resilient than others and therefore more able to easily adjust to and recover from events that cause upset, stress or anxiety. By contrast, children classified as having a disorganised attachment at the age of 12 months are more likely to develop elevated levels of aggression at age 2, have a higher rate of disruptive behaviour at age 5, and to be more impulsive and have difficulty regulating their emotions. These early differences can persist throughout the lifespan (Bachman & Zakahi, 2000; Fearon, et al. 2010; Meins, 2011).

In adulthood, people with a disorganised attachment tend to find it difficult to form close relationships, to open up to others or to seek out help or other forms of social support. They often have difficulty trusting people, as they were unable to trust those they relied on for care and safety when growing up. They may struggle in their relationships or when parenting their own children because of their personal experiences and lack of exposure to a suitable role model. They may also find it difficult to form and sustain solid relationships because they struggle with poor social or emotional regulation skills. They often have difficulty managing stress and may even demonstrate hostile or aggressive behaviours. Because of their negative early life experiences, they may see the world as an unsafe place. These types of characteristics can significantly influence the development and progression of mental health disorder (Firestone, 2016).

**Loss of a significant relationship**

We form many relationships throughout our lives, with some being more significant than others. A significant relationship is a relationship perceived by an individual as being of considerable importance to them. This type of relationship is primarily formed between two or more people but is not necessarily limited to people. Significant relationships include parents, siblings, friends, bosses, even pets and especially intimate others (Brenner, 2011).

Psychologists have tended to focus on the study of interpersonal relationships — those involving people, especially relationships within families, groups and between people who are friends, dating partners or in long-term cohabiting (‘living together’) relationships. These types of relationships are considered significant because they tend to involve elements such as feelings of attachment, affection and/or love, the fulfilments of needs, some degree of dependence or interdependence, and the ability to have a meaningful influence on another person (Kassin, Fein & Markus, 2008).

Loss of a relationship that has these types of elements can therefore have serious or even devastating consequences for the person experiencing that loss. When the loss is due to serious illness, a break up or
death, the loss is inevitably a challenging and potentially very stressful life event.

Following loss of a significant relationship, most people typically experience grief. Grief is the total reaction to the experience of loss, comprising a mix of thought, feelings and behaviours. Two of the more common reactions are sadness and separation anxiety. Other reactions may include stress, anxiety, confusion, exhaustion, anger, guilt, shame and blame. It is not uncommon for grief to cause sleep loss, especially due to sleep onset insomnia. Physical reactions such as nausea, headaches, loss of appetite and various other responses associated with stress or anxiety may also be experienced. Sometimes there is increased alcohol, smoking or drug use (Hall, 2011; Lifeline Australia, 2010).

Grief is a normal, natural and inevitable reaction to loss. However, there is no ‘right or wrong’ way to grieve. Everyone grieves in a different way, regardless of their cultural background. The intensity of the grief, how long it lasts and the reactions to it will differ from person to person. It can be short-lived but it is often an enduring process that has peaks and troughs. There may be times when it seems like grief will never really go away completely.

Although grief affects a person's mental health, it is not considered a mental health problem or disorder in itself. For most people, grief resolves naturally on its own over time. Sometimes, however, the loss of a significant relationship can be overwhelming and have a prolonged impact on a person's mental health. Prolonged grief or ‘non-closure’ may result in the grieving person remaining stuck in their negative state with unresolved grief and an inability to move forward (Brenner, 2011). There may also be changes in one's life — pleasurable things that were once done together, for example, are no longer done. In such cases, loss of a significant relationship can precipitate the development of depression in particular. About one-third of people experiencing grief develop depression, but it is usually weeks or months later (Black Dog Institute, 2013). For example, in one study, it was found that at one month after a loss, about one-third (30–40%) of people experiencing grief also experienced depression, 15% remain depressed a year later and at two years the rate of depression was about 7% (Black Dog Institute, 2015; Hughes, 2011).

Researchers have also found that that the loss of a significant relationship among vulnerable individuals in particular may precipitate depression or a substance use disorder in the same way that other major stressors, such as losing your job, can precipitate the disorder. Other studies have found that people who have a previous history of depression or substance abuse may be at a higher risk of experiencing a relapse of their disorder due to their loss (Black Dog Institute, 2015; Hughes, 2011).

Role of stigma as a barrier to accessing treatment

Mental health support in Australia is provided through a combination of primary health care services, principally by general practitioners, specialised public mental health services managed by states and territories, private sector services delivered by psychologists and psychiatrists, and hospital services.

Despite the availability of services, almost two-thirds of people do not seek or have access to treatment. For example, a significant number of people with mental disorders are unemployed and/or homeless, which are barriers to treatment that make access extremely difficult, if not impossible. Of those who can access support, many report that help is too expensive or they didn’t know where to get it, or that they thought they could manage on their own or with the help of friends or family (ABS, 2007; SANE, 2016b).

There is considerable research evidence that many people also avoid getting the help they need because of the fear of being stigmatised. Consequently, stigma is considered to be a barrier to accessing treatment. The word ‘stigma’ is derived from the Latin stigmat and was used to refer to the mark or scar left when the body of a slave, traitor or criminal was 'branded' to publicise that there was something bad or unusual about them and therefore should be avoided. The contemporary meaning of stigma is based on this original meaning.

Stigma means a mark or sign of shame, disgrace or disapproval typically associated with a particular characteristic or attribute that sets a person apart, such as skin colour, cultural background, a disability or a mental health disorder. To stigmatise means to regard a person as unworthy or disgraceful. When someone is stigmatised they are viewed in a negative way because of some characteristic. When someone is actually treated in a negative way because of their mental disorder, then this is discrimination.
Stigmatisation often involves discrimination. Three out of four people with a mental disorder report that they have experienced stigmatisation (Beyond Blue, 2015a; Mental Health Commission, 2010; SANE, 2016b).

Globally, stigma is considered a major cause of discrimination and exclusion. According to the World Health Organization (2010), stigma affects people’s self-esteem, disrupts their family relationships and limits their ability to socialise and obtain housing and jobs. It hampers the prevention of mental health disorders, the promotion of mental well-being and the provision of effective treatment and care. It also contributes to the abuse of human rights.

Different types of stigma are associated with mental health disorders. Two of the most common types are called social stigma and self-stigma.

The term social stigma refers to any aspect of an individual’s identity that is devalued in a social context. In relation to mental disorders, this involves the negative attitudes, beliefs and behaviour in the community that motivate people to exclude, reject, avoid, fear and discriminate against people with a mental disorder. For example, a social stigmatising view about people with depression is, ‘People with depression should be able to snap out of it’.

Self-stigma refers to the stigmatising views that individuals hold about themselves. In relation to mental disorders, it occurs when individuals with a mental disorder accept negative attitudes and beliefs held by others and internalise or apply them to themselves. For example, a self-stigmatising view by someone with depression is, ‘I should be able to snap out of my depression’.

Some of the effects of stigma include
- feelings of shame, self-doubt, poor self-esteem, low self-efficacy, hopelessness and isolation
- distress
- lack of understanding by family, friends or others
- misrepresentation in the media
- fewer opportunities for social interaction and employment
- bullying, physical violence or harassment.

In addition, there is considerable research evidence that stigma discourages help-seeking. Like any other illness or disorder, a mental health problem is usually easier to treat if diagnosed early. However, many people with early symptoms of a mental disorder are reluctant to seek help because they associate mental disorder with negative and inaccurate beliefs, attitudes or stereotypes. For example, a person may decide to conceal their symptoms as best they can rather than expose them for possible trivialisation, ridicule or some other unwanted response. Because stigma can lead to a reluctance to seek and/or accept necessary help, it is a barrier to accessing treatment.

Stigma can also perpetuate a mental disorder and delay recovery or make recovery harder. For example, staying active and engaged, living a productive life, and feeling accepted by others as part of the community are important elements of mental well-being. However, the experience of stigma can erode self-confidence and make people with a mental disorder shy away from engaging with others to avoid misunderstanding and ridicule. Many people with depression and anxiety disorders report that the stigma and discrimination they experience may be worse than their mental health condition(s) (Beyond Blue, 2015a; SANE, 2016b).

According to Beyond Blue (2015a), some people with depression and anxiety disorders have also reported experiencing stigmatising attitudes from mental health professionals. For example, they report that they feel patronised, punished or humiliated in dealing with professionals. Stigmatising attitudes and behaviours from health professionals may be unintentional, as the health care providers may be unaware that their language and actions can be harmful. Despite this, there can be significant consequences. Stigma may contribute to feelings of embarrassment and shame, which may decrease the likelihood of seeking help, increase psychological distress and reduce treatment adherence. ‘Diagnostic overshadowing’, in which people with depression and anxiety receive poorer physical healthcare than others, can also be attributed to stigma.

These negative consequences may contribute to the increased risk of suicide and the higher mortality rates among people with mental health conditions.

Research studies have also identified certain groups for whom stigma has an even stronger effect on preventing people seeking treatment. These include young people, men, people from ethnic or cultural minorities, and people in the military and health professions. For example, as many as 60% of military personnel who experience mental health problems do not seek help due to concerns about stigma for reasons such as ‘My unit leadership might treat me differently’ and ‘I would be seen as weak’ (Clement, et al., 2014; Sharp, et al., 2014).
**Box 12.4**

**Elements of stigma**

According to research conducted by Beyond Blue (2015a), the most common elements of stigma include:

- **perceptions that a person is ‘weak, not sick’** — ‘My father and my sister don’t believe in mental illness. If you can’t cope with something it’s a weakness of character, not an actual illness.’ Person with depression

- **perceived dangerousness** — ‘All mentally ill are tainted by reports of the extremely unusual “crazy and dangerous”. As if at any time, they could become horrific mass murderers!’ beyondblue blueVoices member

- **beliefs that a person is responsible and can control his/her condition** — ‘Most people seem to think depression is . . . something that is within your character to control.’ Person with a mental health condition

- **feelings of guilt, shame and embarrassment** — ‘You keep it to yourself because you’re ashamed of it.’ Person with depression

- **a reluctance to disclose a diagnosis, due to concerns about discrimination and harassment** — ‘When he [husband] was looking at applying for jobs, his psychiatrist said, “I wouldn’t mention he’s got a mental illness. They don’t need to know”.’ Carer

- **a desire for social distance** — ‘I lost quite a few friends because they were scared of me or didn’t know how to treat me.’ Person with depression and anxiety


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**Figure 12.21** Levels of stigma experienced by people with depression

Source: beyondblue Information Paper: Stigma and discrimination associated with depression and anxiety, p. 5.
LEARNING ACTIVITY 12.9

Analysis of data

Examine figures 12.21 and 12.22 and answer the following questions with reference to relevant data.

1. Explain whether the data provide evidence for the presence of stigma in the community.
2. Explain whether the level of stigma is higher with depression or generalised anxiety disorder.
3. Compare and contrast the type of stigma experienced by people with each disorder, ensuring you refer to a similarity and a difference.
4. Explain whether the data indicate that stigma is a barrier to treatment for mental health disorder.

One in five think anxiety sufferers ‘putting it on’

Sitting at his desk at work, Oliver Shawyer would get so anxious he thought he was having a heart attack.

‘I’d get uncontrollable perspiration, an increased heart rate and then horrible chest pain’, the 30-year-old Sydney advertising executive said.

‘The only way I could deal with it at the time was by inflicting pain to distract my mind. To stop myself from crying, I would just dig my fingers right into my legs.’

Mr Shawyer is one of up to 2 million Australians who have anxiety, the most common mental health condition in the country.

New research has revealed that one in five Australians believes people with anxiety are ‘putting it on’.

The research, which is to be released by charity beyondblue on Monday, also shows more than 10 per cent of Australians aged between 30 and 34 believe people with anxiety are untrustworthy.

Beyondblue chief executive Georgie Harman said anxiety was not just feeling stressed or worried.

‘It is when these feelings don’t subside and are ongoing without any particular reason or cause. Everyone feels anxious from time to time, but for someone experiencing anxiety, these feelings can’t be easily controlled’, she said.

The survey of more than 1200 Australians reveals that damaging attitudes and discrimination against those suffering from anxiety remain.

Almost half agree that people with anxiety are judged or discriminated against. More than 15 per cent of males do not want to work with someone with anxiety, the research has found.

‘It’s alarming’, said Mr Shawyer, who after years of treatment has brought his anxiety under control.
A number of models have been proposed to explain how the accumulation of risk increases the likelihood of mental health disorder. Two of these models are commonly called additive and threshold models.

Additive models propose that as the number of risk factors increases, there is also a corresponding increase in the likelihood of developing a mental disorder. The relationship between risk factors and mental disorder therefore tends to be 'linear' (like a positive correlation). For example, an individual who is exposed to five risk factors will be more likely to develop a mental disorder than an individual exposed to two risk factors. Similarly, the lower the number of risk factors, the lower the likelihood of developing a disorder.

Threshold models propose that the risk of developing a mental disorder is far more likely after exposure to a certain number of concurrent (simultaneously occurring) risk factors and that the risk is in excess of the total of their separate effects. According to these models, risk factors have a multiplier effect as they accumulate, so there a ‘multiplicative’ relationship rather than ‘additive’ relationship among risk factors exists. For example, in one study of 4-year-olds who had been exposed to varying numbers of risks, children exposed to four or more risks had six times the likelihood of experiencing behavioural disorder than did children with no risks (Sameroff, Seifer, & McDonough, 2004).
Research studies examining cumulative risk have consistently found that the accumulation of risk factors increases the likelihood of mental health disorder, either through an additive or threshold effect. Furthermore, the number of risk factors (i.e. cumulative risk) is a better predictor of a variety of mental health outcomes than any single risk factor (Raviv, et al., 2010). The cumulative effect in relation to risk factors has also been found to apply to protective factors. For example, as the number of protective factors increases, there is an increase in the likelihood of a positive mental health outcome, whereas the likelihood of developing a mental health disorder decreases (Rutter, 1999).

### Table 12.5

**Examples of risk and protective factors for children’s mental health.** According to the cumulative risk concept, the more risk factors present, the more likely it is that a child will develop mental health problems. However, the number of protective factors is likely to minimise this effect.

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Protective factors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Childhood factors</strong></td>
<td></td>
</tr>
<tr>
<td>- birth injury/disability/low birth weight</td>
<td>- social skills</td>
</tr>
<tr>
<td>- insecure attachment</td>
<td>- attachment to family</td>
</tr>
<tr>
<td>- poor social skills</td>
<td>- school achievement</td>
</tr>
<tr>
<td><strong>Family factors</strong></td>
<td></td>
</tr>
<tr>
<td>- poor parental supervision and discipline</td>
<td>- supportive caring parents</td>
</tr>
<tr>
<td>- parental substance abuse</td>
<td>- parental employment</td>
</tr>
<tr>
<td>- family conflict and domestic violence</td>
<td>- access to support networks</td>
</tr>
<tr>
<td>- social isolation/lack of support networks</td>
<td></td>
</tr>
<tr>
<td><strong>School factors</strong></td>
<td></td>
</tr>
<tr>
<td>- school failure</td>
<td>- positive school climate</td>
</tr>
<tr>
<td>- negative peer group influences</td>
<td>- sense of belonging/bonding</td>
</tr>
<tr>
<td>- bullying</td>
<td>- opportunities for some success at school and recognition of achievement</td>
</tr>
<tr>
<td>- poor attachment to school</td>
<td></td>
</tr>
<tr>
<td><strong>Community factors</strong></td>
<td></td>
</tr>
<tr>
<td>- neighbourhood violence and crime</td>
<td>- access to support services</td>
</tr>
<tr>
<td>- lack of support services</td>
<td>- community networking</td>
</tr>
<tr>
<td>- social or cultural discrimination</td>
<td>- participation in community groups</td>
</tr>
</tbody>
</table>


### Learning Activity 12.11

**Review questions**

1. Complete the following table to summarise social risk factors for mental health disorder.

<table>
<thead>
<tr>
<th>Social risk factor</th>
<th>Description of risk factor</th>
<th>Example</th>
<th>Explanation of the risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>disorganised attachment</td>
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<tr>
<td>loss of a significant relationship</td>
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<tr>
<td>stigma</td>
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</table>

2. What feature primarily distinguishes social risk factors from other types of risk factors?

3. (a) To what extent may each of the social risk factors co-exist with a mental disorder?
   
   (b) What does this suggest about cause–effect for each factor?

4. To what extent can the impact of social risk factors be controlled?

5. (a) Explain the meaning of cumulative risk in relation to vulnerability to mental health disorder.
   
   (b) Distinguish between the additive and threshold models of cumulative risk.
CHAPTER 12 REVIEW

CHAPTER SUMMARY

The four risk factors
- Genetic vulnerability
- Poor response to medication due to genetic factors
- Poor sleep
- Substance use

Biological risk factors
- Rumination
- Impaired reasoning and memory
- Impaired memory
- Poor self-efficacy

Psychological risk factors
- Stress
- Disorganised attachment
- Loss of a significant relationship
- Role of stigma as a barrier to accessing treatment

Social risk factors

Cumulative risk

4P factor model

MENTAL DISORDER

study on

Unit 3 Area of study 2 Topic 4
Summary screen and practice questions
**KEY TERMS**

- 4P factor model p. 000
- attachment p. 000
- cumulative risk p. 000
- disorganised attachment p. 000
- genetic vulnerability p. 000
- perpetuating risk factor p. 000
- precipitating risk factor p. 000
- predisposing risk factor p. 000
- protective factor p. 000
- protective factor p. 000
- reasoning p. 000
- risk factor p. 000
- rumination p. 000
- self-efficacy p. 000
- stigma p. 000

**LEARNING CHECKLIST**

Complete the self-assessment checklist below, using ticks and crosses to indicate your understanding of this chapter’s key knowledge (a) before and (b) after you attempt the chapter test. Use the ‘Comments’ column to add notes about your understanding.

<table>
<thead>
<tr>
<th>Key knowledge I need to know about</th>
<th>Self-assessment of key knowledge I understand before chapter test</th>
<th>Self-assessment of key knowledge I need to revisit after chapter test</th>
<th>Comments</th>
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</thead>
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CHAPTER TEST

SECTION A — Multiple-choice questions

Choose the response that is correct or that best answers the question.
A correct answer scores 1, an incorrect answer scores 0.
Marks will not be deducted for incorrect answers.
No marks will be given if more than one answer is completed for any question.

Question 1
Which of the following is best described as a psychological risk factor for developing a mental health disorder?
A. poor self-efficacy
B. poor sleep
C. substance use
D. substance abuse

Question 2
A poor response to medication by someone with a mental health disorder means that
A. a psychotropic medication has been prescribed.
B. a psychotropic medication has not been prescribed.
C. an individual has an inappropriate attitude toward using medication.
D. there is little to no reduction in the number or severity of symptoms despite taking medication as prescribed.

Question 3
Enya has been dwelling on the negative aspects of a distressing break-up with her boyfriend for over a week without doing anything to cope with her stress and therefore improve her situation. Enya’s response to a major stressor is best described as
A. stigma.
B. rumination.
C. self-efficacy.
D. loss of a significant relationship.

Question 4
Social risk factors for a mental health disorder are generally considered to be sourced in an individual’s
A. internal environment.
B. external environment.
C. interpersonal perceptions.
D. cognitive behaviour strategies.

Question 5
Each of the statements below describes how four infants behaved when they were distressed and frightened. Which of the following infants most likely has a disorganised attachment?
A. Simon started crying and approached his primary caregiver for comfort.
B. Petra approached her primary caregiver and gave her a hug.
C. Cher began crying and started to approach her caregiver, then suddenly turned away and crawled under a table.
D. Kabe crawled towards his caregiver and put his arms up in the air.

Question 6
Consistently jumping to a conclusion before all available information is presented is most likely attributable to
A. poor self-efficacy.
B. a poor response to stress.
C. a poor response to medication.
D. a reasoning impairment.

Question 7
If someone has a high genetic vulnerability to an anxiety disorder, it is most likely that they
A. have the single gene responsible for anxiety disorders.
B. know someone with an anxiety disorder.
C. have a close biological relative with an anxiety disorder.
D. have been adopted by someone with an anxiety disorder who may also be a biological relative.

Question 8
The role of genes as a contributory factor in depression is primarily based on research evidence showing
A. a genetic vulnerability to high levels of a specific neurotransmitter in the brain.
B. the significantly higher incidence of depression among identical twins when compared with non-identical twins.
C. the significant link between daily hassles and the onset of depression.
D. the effectiveness of antidepressant medications in treating and/or managing depression.

Question 9
When unexpectedly challenged by a major stressor, an individual with poor self-efficacy will tend to
A. believe the challenge can be overcome.
B. look for creative ways of overcoming the stressor.
C. draw on a previous success in overcoming a similar stressor.
D. feel that they do not have the resources to cope.

Question 10
An abnormality of the central nervous system that influences behaviour, thinking, or feeling is a ______ risk factor.
A. biological
B. psychological
C. social
D. protective
Question 11
In the 4P factor model, a perpetuating risk factor
A. increases the likelihood of recovery from a mental health disorder.
B. maintains the occurrence of the symptoms of a mental health disorder and inhibits recovery.
C. strengthens the effects of a protective factor.
D. interacts with a protective factor to minimise onset of disorder.

Question 12
Which of the following is most likely to be a protective factor for a mental health disorder?
A. poor coping skills
B. poor sleep
C. loss of a significant relationship
D. close friendships

SECTION B — Short-answer questions
Answer all questions in the spaces provided. Write using blue or black pen.

Question 1 (2 marks)
Simeon is 29 years old. His fiancée Helena was killed in a car accident four months ago. Since then, Simeon has been feeling very sad, experiencing extreme anger and anxiety about his future, feeling lethargic, has stopped going out with his friends and has difficulties concentrating at work.

How likely is it that Simeon has a mental health disorder? Explain your answer.

Question 2 (3 marks)
(a) Define disorganised attachment. 1 mark

(b) Explain why it is considered a risk factor for the development and progression of a mental health disorder. 2 marks

Question 3 (2 marks)
Explain how self-efficacy could make an individual more vulnerable to the development of a stress-induced mental health disorder.

Question 4 (5 marks)
(a) Explain the meaning of risk factor in relation to mental health disorder. 1 mark

(b) Distinguish between predisposing and precipitating risk factors with reference to an example of each type of factor. 4 marks
Question 5  (3 marks)
Give an example of how a poor response to medication due to genetic factors may contribute to the development or progression of a mental health disorder.

Question 6  (2 marks)
Explain why substance use and poor sleep are considered risk factors for mental health disorder.

Question 7  (4 marks)
Ten-year-old Samir has recently been diagnosed with a specific phobia of water. He is described as an intelligent, friendly and well-liked boy who is a talented soccer player. Samir developed a specific phobia of water a few months after nearly drowning in a swimming pool while on holiday in Bali. Both Samir’s parents were present when he fell into the pool and his father jumped in and rescued him. Samir’s parents are supportive and caring people, however since the pool incident, they have stopped Samir from using any swimming pool, as they don’t want to risk it happening again. They also remind him constantly how ‘dangerous’ water can be. Samir is very close to his grandmother, who gets anxious quite easily, has occasional panic attacks when feeling overwhelmed or stressed, and is likely to have an undiagnosed anxiety disorder.

Use the following table to analyse the development or progression of Samir’s water phobia in terms of the 4P factor model.

<table>
<thead>
<tr>
<th>The ‘P’ factors</th>
<th>Samir’s factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predisposing</td>
<td></td>
</tr>
<tr>
<td>Precipitating</td>
<td></td>
</tr>
<tr>
<td>Perpetuating</td>
<td></td>
</tr>
<tr>
<td>Protective</td>
<td></td>
</tr>
</tbody>
</table>

Question 8  (3 marks)
Explain the data in the graph below with reference to the concept of cumulative risk.
Question 9 (4 marks)

Use the graph above to explain the role of stress as a contributory factor to the development and progression of a mental health disorder, ensuring you refer to where someone would be ‘plotted’ on the graph if they had a high risk of depression as opposed to a low risk.

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Question 10 (4 marks)

(a) Explain the meaning of stigma in relation to mental health with reference to the above cartoon. 2 marks

(b) In what way can stigma serve as a barrier to treatment? 2 marks
Question 11 (8 marks)

Researchers conducted an experiment to investigate the effects of viewing a documentary about schizophrenia on stigma. In particular, they wanted to find out if viewing a documentary that depicts individuals with schizophrenia can reduce stigma.

As part of their course requirements, 163 first-year university psychology students participated in the study. The sample was 55% female and 45% male. The mean age of participants was 18.85 years.

The participants were randomly assigned to one of four conditions: no documentary video, a documentary about polar bears, a documentary about people with obesity, and a documentary about people with schizophrenia.

The effects of the documentaries were examined on a range of stigma-related variables including whether a person with schizophrenia should be blamed or deemed responsible for their disorder (blame/responsibility) and whether schizophrenia can change over time (changeability).

These variables were measured by responses to items in a seven-point Likert scale. The items and scales were:

- blame (1 = not at all to blame, to 7 = entirely to blame)
- responsibility (1 = not at all responsible, to 7 = entirely responsible)
- changeability (1 = not at all likely to change, to 7 = will change).

Higher scores reflected higher levels of blame and responsibility, and lower levels of changeability. The graph below shows the results for the first two stigma-related variables.

The study also examined beliefs about how likely people with schizophrenia are to be a danger to others. In terms of the ‘dangerousness’ measure, participants who viewed the schizophrenia film generally perceived individuals with schizophrenia as less dangerous than did participants in the other conditions. However, the mean differences were not statistically significant, suggesting that the schizophrenia film was unable to affect general attitudes reflecting social stigma.

(a) Formulate a research hypothesis for the experiment. 1 mark

(b) Name the experimental design. 1 mark

(c) Identify the operationalised independent and dependent variables. 2 marks

(d) Identify the experimental and control conditions. 2 marks

(e) What conclusion can be drawn on the basis of the results obtained? 1 mark

(f) Suggest a possible limitation of the experiment. 1 mark

Return to the checklist on page xxx and complete your self-assessment of areas of key knowledge where you need to do more work to improve your understanding.

**eBookplus**

The answers to the multiple-choice questions are in the answer section at the end of this book and in eBookPLUS.

The answers to the short-answer questions are in eBookPLUS.

Note that you can also complete Section A of the chapter test online through eBookPLUS and get automatic feedback. int-0000