

CBT may be more effective than antidepressant drugs (Breedvelt et al., 2021). There is also growing evidence that self-guided online interventions are effective for various psychological conditions (de Oliveira et al., 2023; Eilert et al., 2022). Psychodynamic and psychoanalytic therapies are effective for many psychiatric disorders (Leichsenring et al., 2023).

In many cases, better outcomes result from a combination of medication and counselling than from either approach in isolation (Guidi & Fava, 2021). For example, in anxiety disorders, anxiolytics may alleviate the immediate physical symptoms and thereby facilitate psychotherapy.

Electroconvulsive Therapy

Electroconvulsive therapy (ECT) involves passing an electric current across a person's brain to alter its activity. There is evidence of its efficacy for depression (Elias et al., 2018), but the therapy attracts controversy (Meechan et al., 2022). It may also be useful for schizophrenia or post-traumatic stress disorder (PTSD) (Ali et al., 2019; Youssef et al., 2017). ECT tends to be used for severe conditions that have not responded to medication or which threaten the wellbeing of the patient or other people (e.g., mothers with puerperal psychosis, people with a high suicide risk).

Medical Decision Making in Psychiatric Disorders

Impaired cognitive functioning associated with some psychiatric disorders may hinder people's capacities to be involved in decision making or to give informed consent to treatment. People who lack insight may not recognise that they are unwell and require treatment. The concept of 'capacity' for decision making is important, but there is debate as to how it should be defined and implemented in the context of psychiatric disorders, and what should be done if it is thought that a person may lack capacity (Calcedo-Barba, 2020). Many of these issues also apply in the neuropsychiatric disorders described in the next section (Jayes et al., 2020).

Summary 7.4

- A thorough psychiatric interview involves taking a psychiatric history and conducting a Mental State Examination.
- Many psychiatric disorders present as syndromes, and symptoms are shared between many of these syndromes. This makes differential diagnosis important.
- When developing a treatment plan, medical, psychological, and social interventions should be considered.
- Psychological therapies can be as effective as medication for many psychiatric disorders, in particular mood disorders.

7.4 Neurological Disorders

Degeneration or damage within the brain and nervous system can lead to a range of disorders. Their precise nature is determined by the location and extent of the impairment to normal functioning. Because different brain regions have different functions, damage or disorders that are localised in specific brain regions tend to have specific outcomes. This section outlines several

common neurological disorders, their psychological aspects, and their treatment. It is followed by sections on neuropsychological assessment and rehabilitation.

Multiple sclerosis (MS) is characterised by the inflammation and demyelination of the central nervous system. It may result in a loss of sensation or function in the limbs, incontinence, fatigue, pain, cognitive impairments, and mood disorders. MS is believed to be an autoimmune disorder, but the exact processes involved are not known, and there is no cure. The unpredictable and variable nature of MS impair psychological wellbeing and cognition, but psychological comorbidities in MS are often under-diagnosed (Solaro et al., 2018). Although there is no cure for MS, psychological interventions can be effective for managing depression and helping people to cope with the physical limitations arising from the condition (Faraclas, 2023).

Motor Neurone Disease (also called Amyotrophic Lateral Sclerosis or ALS) is a rare and terminal disorder which involves the progressive degeneration of motor neurons and leads to progressive weakness in the skeletal muscles. Its cause is not known, nor is it known why the sensory nerves, which have a similar structure, are not affected. Mood disorders often occur, and quality of life tends to be worse if there is greater functional impairment (Rosa Silva et al., 2020). Impairment to overall quality of life appears to be smaller if social support is available.

Disorders of the basal ganglia, such as Parkinson's disease and Huntington's disease, cause severe motor deficits (see 7.1.3), but also have important cognitive and emotional aspects. The symptoms of basal ganglia disorders have been referred to as the three Ds: dyskinesia, dementia, and depression (McHugh, 1989). **Parkinson's disease** is a severe, incurable motor disorder characterised by muscle stiffness, slowness of movement, an unstable posture, and muscle tremors (see Case Study 7.1). It is a progressive degenerative disorder resulting from a severe reduction in dopamine activity in the basal ganglia. Standard pharmacological treatment is the dopamine precursor L-Dopa, but the use of deep brain stimulation has also progressed (Wolff et al., 2023). Cognitive deficits are common and include impairments to memory and information processing. Depression, anxiety, lethargy, sleep disturbances, and pain are more common among people with Parkinson's disease than in the general population (Weintraub et al., 2022). CBT and mindfulness-based therapies can reduce psychological distress in people with Parkinson's disease (Ghielen et al., 2019; Roper et al., 2024).

Huntington's disease is characterised by involuntary rapid, ceaseless movements or tics. Other symptoms include a loss of coordination and balance, slurred speech, and difficulties in swallowing. It is a genetically determined disorder caused by the progressive degeneration of specific neurons. There is no cure for Huntington's disease and death usually occurs 15–25 years after symptom onset. Cognitive deficits are common, and people with Huntington's disease have an elevated risk of mood disorders and suicidal behaviour (Clark et al., 2023). Treatment focuses on addressing the physical and psychological symptoms, preventing complications, and providing psychological support.

Dementia involves the progressive loss of cognitive function due to damage or disease in the brain. In high-income countries, dementia is now one of the most common causes of death. Dementia is not a single disorder but a syndrome, the symptoms of which vary between people, depending on the location and cause of the disorder. Vascular dementias result from multiple small strokes which, in accumulation, produce a sufficient loss of neurons and accompanying changes in behaviour and cognition.

Dementia of Alzheimer type (DAT or **Alzheimer's disease**) accounts for over half of all dementias. It involves the progressive loss of neurons and synapses in the cerebral cortex and particular subcortical regions. Loss of neurons in DAT may be caused by a combination of genetic factors and environmental influences. DAT is characterised by progressive impairments to memory, cognitive

capacities, and social functioning, which are commonly accompanied by confusion, irritability, and mood swings. People with DAT are more likely than the general population to experience anxiety, irritability, depression, and apathy, and greater psychological symptoms may be predictive of further cognitive decline (Asmer et al., 2018; Y.Y. Huang et al., 2023).

It can be difficult to make a differential diagnosis between depression and the early stages of dementia because depressed people often experience impaired concentration and memory, and depression and apathy often co-occur with dementia (Gilmore-Bykovskiy et al., 2019; see also Case Study 7.3).

Drug therapies have a small but significant impact on cognitive functioning in Alzheimer's disease, and exercise therapy can also be effective (H.A. Fink et al., 2020; Hort et al., 2023; Moniruzzaman et al., 2021).

Case Study 7.3

Identifying the Early Stages of Dementia



Figure 7.8 Signs of dementia in Andreas' wife Maria

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As dementia develops, people may not have full awareness of changes in their behaviour or their own memory problems. Andreas visited his doctor on his own on what was supposed to be a joint visit with his wife Maria. He had become worried about changes in Maria's behaviour.

(Continued)

Andreas said that he did not notice the gradual changes occurring day to day, until it was pointed out to him by other people who had less frequent contact with her:

One example was with my son. He lives overseas, so only visits now and then. He took Maria out shopping for a new coat, and when he came back said 'Why haven't you told me how down she is? She wasn't really interested in anything, and when we were having coffee, she was just in a world of her own'. When he told me how much she had changed since the summer it really shocked me.

When he said that, I did wonder whether she might be depressed. But then there were other things, like forgetting to lock the house or the car – and she didn't like it when I pointed it out. I wasn't sure what was wrong, but it was starting to worry me. That worry must have grown because one time she said, 'Why are you always getting annoyed with me?' and I just said, 'It's because I'm so worried about you', and that made her really upset. So I suggested that we should see the doctor.

After a subsequent productive three-way discussion, the doctor was able to determine that Maria was displaying signs of dementia.

Now that I have spoken to other people, I've realised that a lot of us went through the same kinds of things. At first, it's hard to notice that there is a series of unrelated and apparently insignificant things that you can only make sense of with hindsight and through talking to other people.

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In a **stroke**, central nervous system neurons die because of disruptions to the blood flow to the brain (see Chapter 16). Neurological deficits often arise from a stroke. Post-stroke, people have elevated risks of depression and anxiety, and they are more likely to experience irritability, agitation, eating disturbances, and apathy (L. Liu et al., 2023; S. Zhang et al., 2020). There is, therefore, a need for physical, cognitive, and psychological rehabilitation. Psychiatric disorders after stroke are important in their own right, but they also hamper physical rehabilitation (Ahn et al., 2015). Evidence indicates that psychological interventions can be an effective way to treat mood disorders that arise after a stroke (Allida et al., 2023).

Acquired brain injury (ABI) is another cause of neurological impairment. Traumatic brain injuries commonly arise from blunt injuries to the head during 'closed head injuries', such as road traffic accidents, falls, assaults, or sporting injuries. In contrast, 'open head injuries' occur when a sharp object penetrates the skull and tend to result in more localised damage. Closed head injuries tend to result in a diffuse array of cognitive, behavioural, and emotional symptoms.

Because multiple mechanisms may be involved in ABIs, the resulting neural damage tends to be heterogeneous. Damage to the prefrontal cortex often leads to changes in personality and psychological adjustment, such as irritability, disinhibition, and aggression (Vaghela et al., 2023). Rates of depression and anxiety are elevated following ABIs. Overall quality of life tends to be impaired because of an interaction between biological factors such as the