

A PEARSON AUSTRALIA CUSTOM BOOK

# HBS110 HEALTH BEHAVIOUR

3RD EDITION

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# CHAPTER I

## WHAT IS HEALTH?

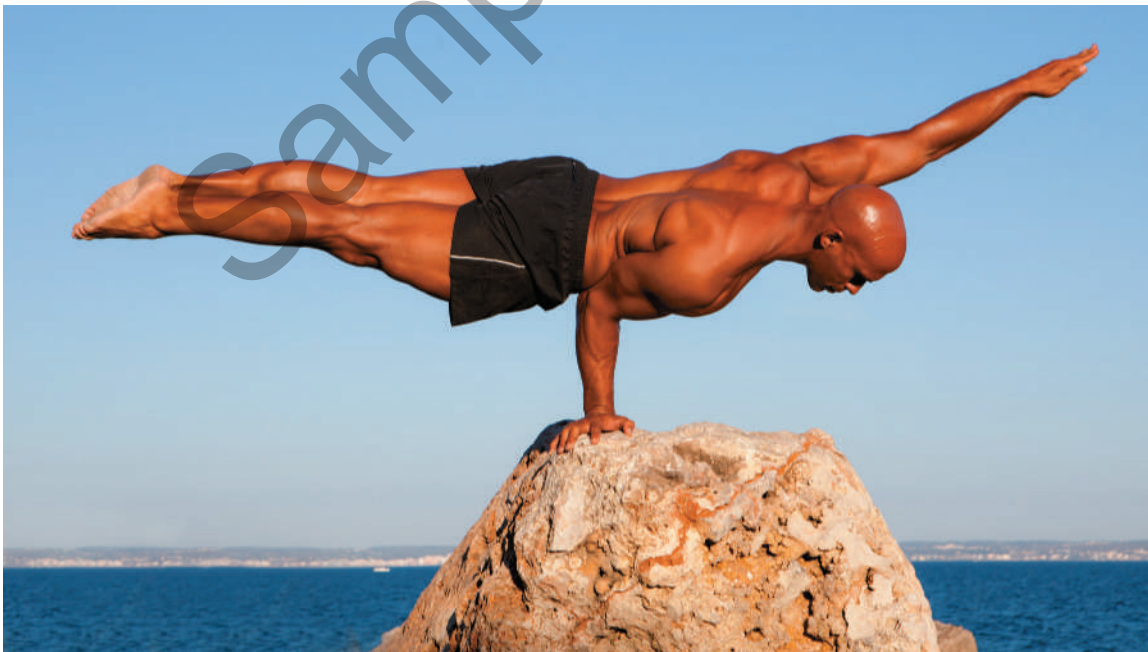
### Learning outcomes

By the end of this chapter, you should be able to:

- LO 1.1 Explain key perspectives on health, illness and disability, including the biomedical and biopsychosocial models.
- LO 1.2 Classify factors that influence health status.
- LO 1.3 Describe the influence of life stage, culture and health status on health.
- LO 1.4 Identify a range of important influences on the domains of health.

### HEALTH IS GLOBAL

In August 2014 Rome was converged upon, not by tourists (although they were there too!), but by plane-loads of scientists from industry and academic institutions, those working in health informatics, and possibly some health psychologists, to attend the Third International Conference on Global Health Challenges. Of relevance here is that the Rome conference addressed how best to record and analyse global data relating to disease, death, lifestyle and population change, the 'big data' that helps guide



Source: godfer/Fotolia.com

public health policies for the future. At the conference, as in this chapter, it was essential to acknowledge inequities in these data within and between countries. The conference also addressed how health and mobile technologies can be best used to promote individual and population health through changes in clinical practice, increased health monitoring or behaviour change ‘nudging’, and how, globally, we can prepare for pandemics and an ageing population. The Seventh International Conference on Global Health Challenges held in 2018 in Athens had a continued focus on the importance of harnessing technologies to improve health. Specifically, topics included the use of informatics to improve health, the use of scalable electronic systems and technology in healthcare and other eHealth initiatives. The challenges associated with advances in technology, such as security and data quality assurance, were also prioritised, as were ways to harness these technologies to allow them to increase access to quality healthcare. In addition, the 2018 conference focused on patient-centred care and ‘alternative’ models of care, including preventative medicine, natural approaches to medicine and home surveillance.

According to the Department of Foreign Affairs and Trade (DFAT, 2017), Australia contributes to global health in numerous ways. This includes contributing to

the global fund to fight AIDS, tuberculosis and malaria and being part of Gavi, the Vaccine Alliance which aims to introduce new vaccination programs in developing countries. In recognition of the importance of global health to our own future, the Australian government continues to give a core voluntary contribution to the World Health Organization (\$12.36 million in 2016–2017) and the Joint United Nations program on HIV/AIDS (UNAIDS) (\$4.5 million in 2016–2017). In addition to these ongoing contributions, the government also pledged \$54 million towards the eradication of polio in 2015–2020.

Around the world, many of us attend conferences such as the Global Health event in Athens, Greece, in 2018. These conferences allow us to identify new developments, what is cutting edge, and what is the exciting science that can perhaps have an impact on future health in our own country and on a global scale. This textbook brings together evidence that can not only educate the aspiring health psychologist, but also help inform both policy and practice. Whether we achieve important policy and practice change will depend on what we as health psychologists ‘do’ with our evidence. Hopefully over the course of the 11 chapters in this book you will get a good sense of our successes, and the challenges ahead, nationally and internationally.

## Chapter outline

This chapter aims to provide a base understanding of health, illness and disability as outlined by the World Health Organisation. This chapter explains the biomedical and biopsychosocial models of health in addition to the factors that can influence one’s health status. Life stage, culture and health status can impact our health and our health perceptions. This chapter finishes with focusing on the different domains of health and the key factors that can impact our health.

# What is health? Changing perspectives

## *Models of health and illness*

First, we need to be clear about what health is. Health is a word that most people will use without realising that it may hold different meanings for different people, at different times in history, in different cultures, in different social classes, or even within the same family, depending, for example, on age or gender. Stone (1979) pointed out that until we can agree on the meaning of health and how it can be measured we are going to be unable to answer questions about how we can protect, enhance and restore health. The root word of health is ‘wholeness’, and indeed ‘holy’ and ‘healthy’ share the same root word in Anglo-Saxon, which is perhaps why so many cultures

associate one with the other (e.g. Aboriginal medicine men in Australia are traditionally also spiritual leaders). The fact that health's linguistic roots are in 'wholeness' also suggests the early existence of a broad view of health that included both mental and physical aspects. This view has not held dominance throughout history. Some different, but not necessarily oppositional, views of health are described below.

### ❁ *Mind–body relationships*

Archaeological finds of human skulls from the Stone Age have attributed the small neat holes found in some skulls to the process of 'trephination' (or trepanation), whereby a hole is made in order for evil spirits to leave the ailing body. Disease appeared to be attributed to evil spirits. However, by the time of ancient Greece, the association between mind and body was viewed somewhat differently. It is in the writings from ancient Greece (circa 500 BC) that we see differing explanations of health and disease to that seen in earlier times. Instead of attributing illness to evil spirits or gods, the ancient Greek physician Hippocrates (circa 460–377 BC) attributed it to the balance between four circulating bodily fluids (called humours): yellow bile, phlegm, blood and black bile. It was thought that when a person was healthy the four humours were in balance, and when they were ill-balanced due to external 'pathogens', illness occurred. The humours were attached to seasonal variations and to conditions of hot, cold, wet and dry, where phlegm was attached to winter (cold–wet), blood to spring (wet–hot), black bile to autumn (cold–dry) and yellow bile to summer (hot–dry). Hippocrates considered the mind and body as one unit, and thus it was thought that the level of specific bodily humours related to particular personalities: excessive yellow bile was linked to a choleric or angry temperament; black bile was attached to sadness; excessive blood was associated with an optimistic or sanguine personality; and excessive phlegm with a calm or phlegmatic temperament. Healing involved attempts to rebalance the humours, for example, through bleeding or starvation, or special diets and medicines. Even this far back in time, eating healthily was considered helpful to the balance of the humours (Helman, 1978). This humoral **theory** of illness attributed disease states to bodily functions but also acknowledged that bodily factors impacted on the mind.

This view continued with Galen (circa AD 129–199), another influential Greek physician in ancient Rome. Galen considered there to be a physical or pathological basis for all ill health (physical or mental) and believed not only that the four bodily humours underpinned the four dominant temperaments (the sanguine, the choleric, the phlegmatic and the melancholic) but also that these temperaments could contribute to the experience of specific illnesses. For example, he proposed that melancholic women were more likely to get breast cancer, offering not a psychological explanation but a physical one because melancholia was itself thought to be underpinned by high levels of black bile. This view was therefore that the mind and body were interrelated, but only in terms of physical and mental disturbances both having an underlying physical cause. The mind itself was not thought to play a role in illness **aetiology**. This view dominated thinking for many centuries to come but lost predominance in the eighteenth century when organic medicine, and in particular cellular pathology, developed and failed to support the humoral underpinnings. However, Galen's descriptions of personality types were still in use in the latter half of the twentieth century (Marks, Murray, Evans & Willig, 2000, pp. 76–77).

In the early Middle Ages (fifth–sixth century), however, Galen's theories had lost dominance when health became increasingly tied to faith and spirituality. At this time, illness was seen as God's punishment for misdeeds or, similar to very early views, the result of evil spirits entering one's soul. Individuals were thought to have little control over their health, whereas priests, in their perceived ability to restore health by driving out demons, did. The Church was at the forefront of society at this time and so science developed slowly. The mind and body were generally viewed as working together, or at least in parallel. However, the prohibition of scientific investigation, such as dissection, limited medical progress and advancements in understanding, and therefore mental and mystical explanations of illness predominated. Such causal explanations elicited treatment along the lines of self-punishment, abstinence from sin, prayer or hard work.

These religious views persisted until the early fourteenth and fifteenth centuries when a period of 'rebirth', the Renaissance, began. During the Renaissance, individual thinking became

#### **theory**

A general belief or beliefs about some aspect of the world we live in or those in it, which may or may not be supported by evidence; for example, women are worse drivers than men.

#### **aetiology (etiology)**

The cause of disease.

increasingly dominant and the religious perspective became only one among many. The scientific revolution of the early 1600s led to huge growth in scholarly and scientific study and developments in physical medicine. As a result, the understanding of the human body, and the explanations for illness, became increasingly organic and physiological, with little room for psychological explanations.

During the early seventeenth century, the French philosopher René Descartes (1596–1650), like the ancient Greeks, proposed that the mind and body were separate entities. However, Descartes also proposed that interaction between the two ‘domains’ was possible, although initially the understanding of how mind–body interactions could happen was limited. For example, how could a mental thought, with no physical properties, cause a bodily reaction (e.g. a neuron to fire) (Solmes & Turnbull, 2002)? This is defined as **dualism**, where the mind is considered to be ‘non-material’ (i.e. not objective or visible, such as thoughts and feelings) and the body is ‘material’ (i.e. made up of real mechanical ‘stuff’, physical matter such as our brain, heart and cells). Dualistic thinking considers the material and the non-material to be independent. Physicians acted as guardians of the body, which was viewed as a machine amenable to scientific investigation and explanation, whereas theologians acted as guardians of the mind—a place not amenable to scientific investigation. The suggested communication between mind and body was thought to be under the control of the pineal gland in the midbrain, but the process of this interaction was unclear. Because Descartes believed that the soul left humans at the time of death, dissection and autopsy study became acceptable to the Church, and so the eighteenth and nineteenth centuries witnessed a huge growth in medical understanding. Anatomical research, autopsy work and cellular pathology concluded that disease was located in human cells, not in ill-balanced humours.

Dualists developed the notion of the body as a machine (a **mechanistic** viewpoint), understandable only in terms of its constituent parts (molecular, biological, biochemical, genetic), with illness understood through the study of cellular and physiological processes. Treatment during these centuries became more technical, diagnostic and focused on the physical evidence obtainable, with individuals perhaps more passively involved than previously (when at least they had been expected to pray or exorcise their demons in order to return to health). This approach underpins the **biomedical model** of illness.

### ❁ *Biomedical model of illness*

In this model, health is defined as the absence of disease, and any symptom of illness is thought to have an underlying physical pathology that will hopefully, but not inevitably, be cured through medical intervention. Adhering rigidly to the biomedical model would lead to proponents dealing only with objective facts and assuming a direct causal relationship between illness or disability, its symptoms or underlying pathology (disease), and adjustment outcomes. The assumption is that removal of the pathology through medical intervention will lead to restored health (i.e. illness or disability results from disease either originating outside the body, ‘germs’, or through involuntary internal changes, such as cell mutations). This relatively mechanistic view of how our bodies and organs work, fail and can be treated allows little room for subjectivity. The biomedical view has been described as reductionist where the basic idea is that mind, matter (body) and human behaviour can all be reduced to, and explained at, the level of cells, neural activity or biochemical activity. Reductionism tends to ignore evidence that different people respond in different ways to the same underlying disease because of differences, for example, in personality, cognition, social support resources or cultural beliefs.

The history of Aboriginal and Torres Strait Islander people’s medicine follows a different path to that of Western medicine. For a detailed discussion of this topic see Maher (1999) and Thomson (2003), who include references to other material. Maher notes diversity between Australian indigenous groups in the content and strength of their beliefs, but suggests that, overall, the traditional Aboriginal model of illness causation emphasises social and spiritual dysfunction as a cause of illness. This approach emphasises that individual wellbeing is always contingent upon the effective discharge of obligations to society and the land. People who do not discharge their obligations, or breach a taboo, are made ill, either through physical intervention (e.g. a car accident) or

#### **dualism**

The idea that the mind and body are separate entities (cf. Descartes).

#### **mechanistic**

A reductionist approach that reduces behaviour to the level of the organ or physical function. Associated with the biomedical model.

#### **biomedical model**

A view that diseases and symptoms have an underlying physiological explanation.



Photo 1.1 Having a disability does not equate with a lack of health and fitness.

Source: flysnow/Fotolia.com

supernatural intervention (e.g. a serious illness). Thus Aboriginal and Torres Strait Islander culture has always emphasised the connection between the mind, spirit and body, which is more akin to a broader biopsychosocial approach.

### ❁ *Biopsychosocial models of health and illness*

In terms of mind–body associations, what is perhaps closer to the ‘truth’, as we understand it today, is that there is one type of ‘stuff’ (monist) but that it can be perceived in two different ways: objectively and subjectively. For example, many illnesses have organic underlying causes, but also elicit uniquely individual responses due to the action of the mind (i.e. subjective responses). So, while aspects of reductionism and dualistic thinking have been useful, for example, in furthering our understanding of the aetiology and course of many acute and infectious diseases (Larson, 1999), the role of the mind in the manifestation of, and response to, illness is crucial to furthering our understanding of the complex nature of health and illness. Consider, for example, the extensive evidence of ‘phantom limb pain’ experienced in amputees—how can pain exist in an absent limb? Or consider the widespread acknowledgement of the placebo effect—how can an inactive (dummy) substance lead to reported reductions in pain or other symptoms which are equivalent to reductions described by those receiving an active pharmaceutical substance or treatment? Subjectivity in terms of beliefs, expectations and emotions interact with bodily reactions to play an important role in the illness or stress experience.

This text aims to illustrate that psychological and social factors can add to biological or biomedical explanations and understanding of health and illness experiences. This is known as the **biopsychosocial** model, and was first proposed by George L. Engel in 1977. The biopsychosocial model is the basis of much of health psychology and is also employed in several allied health professions, such as occupational therapy and, to a growing extent, in the medical profession. The biopsychosocial model remains relevant today and has garnered more than 10 000 citations on Google Scholar and its influence over healthcare and medical research has only continued to grow over the past 40 years (Fava & Sonino, 2017; Wade & Halligan, 2017).

#### **biopsychosocial**

A view that diseases and symptoms can be explained by a combination of physical, social, cultural and psychological factors (cf. Engel, 1977).

### ❖ *Challenging dualism: psychosocial models of health and illness*

Evidence of changed thinking was illustrated in an editorial in the *British Medical Journal* (Bracken & Thomas, 2002) suggesting a need to ‘move beyond the mind–body split’. The authors note that simply because neuroscience enables us to explore the ‘mind’ and its workings ‘objectively’ by the use of increasingly sophisticated scanning devices and measurements, this does not mean we are furthering our understanding of the subjective ‘mind’—the thoughts, feelings and the like that make up our lives and give it meaning. They comment that ‘conceptualising our mental life as some sort of enclosed world living inside our skull does not do justice to the reality of human experience’ (p. 1434). The fact that this editorial succeeded in being published in a medical journal with a traditionally biomedical stance is evidence of a weakened Cartesian ‘legacy’.

As our understanding of the bi-directional relationship between mind and body has grown, dualistic thinking has lessened, and psychology has played a significant role in this altering perspective. A key role was played by Sigmund Freud in the 1920s and 1930s when he redefined the mind–body problem as one of ‘consciousness’ and postulated the existence of an ‘unconscious mind’ seen in a condition he named ‘conversion hysteria’. Following examination of patients with physical symptomatology but no identifiable cause, and by using hypnosis and free association techniques, he identified unconscious conflicts which he believed had been repressed. These unconscious conflicts were considered to ‘cause’ the physical disturbances including paralysis and loss of sensation in some patients where no underlying physical explanation was identified (i.e. hysterical paralysis; e.g. Freud & Breuer, 1895).

Freud stimulated much work into unconscious conflict, personality and illness, which ultimately led to the development of the field of *psychosomatic medicine* (see later section). Psychologists have highlighted the need for medicine to become more holistic and to consider the role played in the aetiology, course and outcomes of illness by psychological and social factors. As described above, the biopsychosocial model signals a broadening of a disease or biomedical model of health to one encompassing and emphasising the interaction between biological processes and psychological and social influences (Engel, 1977, 1980). In doing so, it offers a complex and multivariate, but potentially more comprehensive, model with which to examine the human experience of illness. It burgeoned in popularity as a result of the many challenges to the biomedical approach as briefly illustrated above, but also due to increasing recognition of the role individual behaviour plays in health and illness. It is to this that we turn our attention briefly now.<sup>A</sup>

### *Wellness and the dimensions of health*

In 1968, biologist, environmentalist, and philosopher René Dubos proposed an even broader definition of health. In his Pulitzer Prize-winning book *So Human an Animal*, Dubos (1968, p. 15) defined health as ‘a quality of life, involving social, emotional, mental, spiritual, and biological fitness on the part of the individual, which results from adaptations to the environment.’ This concept of *adaptability*, or the ability to cope successfully with life’s ups and downs, became key to our overall understanding of health.

Later, the concept of **wellness** enlarged Dubos’s definition of health by recognising levels—or gradations—of health (Figure 1.1). To achieve *high-level wellness*, a person must move progressively higher on a continuum of positive health indicators. People who fail to achieve these levels may slip into illness, disability, or premature death.

Today, the words *health* and *wellness* are often used interchangeably to describe the dynamic, ever-changing process of trying to achieve one’s potential in each of six interrelated dimensions (Figure 1.2):

**wellness**  
The achievement of the highest level of health possible in each of several dimensions.

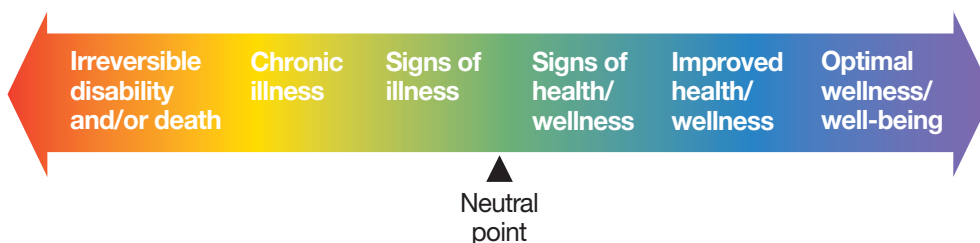


Figure 1.1 The wellness continuum.





Figure 1.2 The dimensions of health. When all dimensions are balanced and well developed, they support an active, thriving lifestyle.

Source: Maridav/Fotolia

- **Physical health:** This dimension includes features such as the shape and size of your body, how responsive and acute your senses are, and your body's ability to function at optimum levels with adequate sleep and rest, nutrition, and physical activity. It also includes your ability to avoid, manage, or heal from injury or illness. More recent definitions of physical health encompass a person's ability to perform *activities of daily living (ADLs)*, which are the activities that are essential to function normally in society—including things like getting up out of a chair, bathing and dressing yourself, cooking, toileting, and walking.
- **Social health:** The ability to have a broad social network and maintain satisfying interpersonal relationships with friends, family members, and partners is a key part of overall wellness. Successfully interacting and communicating with others, adapting to various social situations, and being able to give and receive love are all part of social health.
- **Intellectual health:** The ability to think clearly, reason objectively, analyse critically, and use brainpower effectively to meet life's challenges are all part of this dimension. This includes learning from successes and mistakes, making sound decisions, and having a healthy curiosity about life.
- **Emotional health:** This is the feeling component—being able to express emotions when appropriate and to control them when not. Self-esteem, self-confidence, trust, and love are all part of emotional health.
- **Spiritual health:** This dimension involves creating and expressing meaning and purpose in your life. This may include believing in a supreme being, following a particular religion's rules and customs, or simply feeling that you are part of a greater spectrum of existence. The capacities to contemplate life's experiences and to care about and respect all living things are aspects of spiritual health.
- **Environmental health:** This dimension entails understanding how the health of the environments in which you live, work, and play can affect you; protecting yourself from hazards in your own environment; and working to preserve, protect, and improve environmental conditions for everyone.

Achieving wellness means attaining the optimal level of wellbeing for your unique limitations and strengths. For example, a physically disabled person may function at his or her optimal level of physical and intellectual performance, enjoy satisfying relationships, and be engaged in environmental concerns. In contrast, someone who spends hours lifting weights but pays little attention to others may lack social or emotional health. The perspective we need is *holistic*, emphasising the balanced integration of mind, body, and spirit.

## What influences your health?

If you're lucky, aspects of your world conspire to promote your health: Everyone in your family is fit and has a weight appropriate to age and build; there are fresh vegetables on sale at the neighbourhood farmer's market; and a new bike trail has opened along the river (and you have a bike!). If you're not so lucky, aspects of your world discourage health: Everyone in your family is overweight and nobody gets much exercise; your peers urge you to keep up with their drinking; the corner market has only cigarettes, alcohol, and junk food for sale; and you wouldn't dare walk or ride alongside the river for fear of being mugged. In short, seemingly personal choices are not always totally within an individual's control.

Public health experts refer to the factors that influence health as **determinants of health**, a term the US Surgeon General defines as 'the range of personal, social, economic, and environmental factors that influence health status.' (U.S. Department of Health and Human Services, 2016a) The Surgeon General's health promotion plan, called *Healthy People*, has been published every ten years since 1990 with the goal of improving the quality and years of life for all Americans. The overarching goals set out by the newest version, *Healthy People 2020*, are as follows:

- Attain high-quality, longer lives free of preventable diseases.
- Achieve health equity, eliminate disparities, and improve health of all groups.
- Create social and physical environments that promote good health for all.
- Promote good quality of life, healthy development, and healthy behaviours across all life stages.

*Healthy People 2020* classifies health determinants into five categories: individual behaviour, biology and genetics, social factors, health services, and policymaking (Figure 1.3). It also includes strong



Photo 1.2 Today, health and wellness mean taking a positive, proactive attitude toward life and living it to the fullest.

Source: Michael Jung/Fotolia

### determinants of health

The range of personal, social, economic, and environmental factors that influence health status.

### health disparities

Differences in the incidence, prevalence, mortality, and burden of diseases and other health conditions among specific population groups.

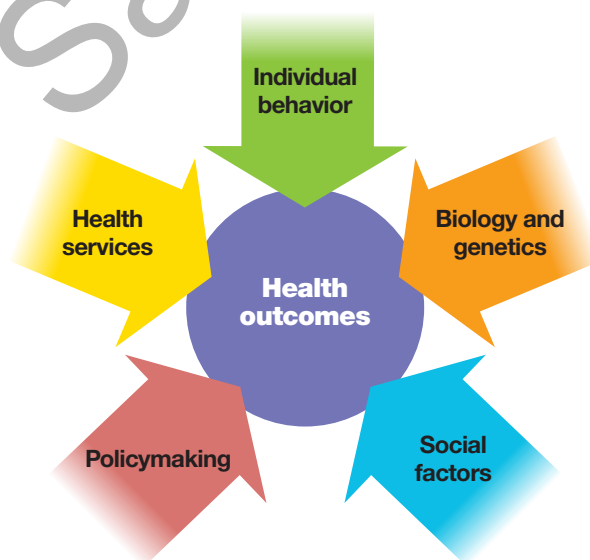


Figure 1.3 *Healthy People 2020* determinants of health. The determinants of health often overlap with one another. Collectively, they affect health of individuals and communities.

language about reducing **health disparities** that exist between populations based on racial or ethnic background, sex and gender, income and education, health insurance status, geographic location, sexual orientation, and disability (U.S. Department of Health and Human Services, 2016a).

### Individual behaviour

Individual behaviours can help you attain, maintain, or regain good health, or they can undermine your health and promote disease. Health experts refer to behaviours within your power to change as *modifiable determinants*. Modifiable determinants significantly influence your risk for chronic disease, which is responsible for seven out of ten deaths in the United States (Centers for Disease Control and Prevention, 2016). Incredibly, just four modifiable determinants are responsible for most chronic disease (Figure 1.4) (Centers for Disease Control and Prevention, 2016):

- *Lack of physical activity.* Low levels of physical activity contribute to over 200,000 deaths in the United States annually (Sallis & Carlson, 2015).
- *Poor nutrition.* Multiple studies have linked diets low in fruits and vegetables with an increased risk of death by any cause (Wang et al., 2014).
- *Excessive alcohol consumption.* Alcohol causes 88 000 deaths in adults annually through cardiovascular disease, liver disease, cancer, and other diseases, as well as motor vehicle accidents and violence (CDC, 2016a).
- *Tobacco use.* Tobacco smoking and the cancer, high blood pressure, and respiratory disease it causes are responsible for about one in five deaths of American adults (CDC, 2016b).

On the flip side, a recent study tracking more than 2100 young adults (aged 18 to 30 years) found that those who maintained a healthful body weight, ate a nourishing diet, engaged in physical activity, and did not smoke were about twice as likely to maintain normal blood pressure and other indicators of cardiovascular health 25 years later than were those who did not practise these behaviours (Gooding et al., 2015).

Another major contributor to disease and mortality among Americans is the rising abuse of prescription and illegal drugs, especially opioid pain relievers and heroin. Between 1999 and 2015, the number of overdose deaths involving these drugs quadrupled. Every day, 142 Americans die from an opioid overdose (President's Commission on Combating Drug Addiction and the Opioid Crisis, 2017).

Other modifiable determinants include stress levels, exposure to toxic chemicals in the home and work environments, use of over-the-counter medications, sexual behaviours and use of contraceptives, sleep habits, and hand hygiene and other simple infection control measures. In addition, climate change, which has contributed to a rise in emerging infectious diseases, malnutrition, and many other global health problems, is modifiable with individual behaviour change and with changes in policies and programs.

### Biology and genetics

Biological and genetic determinants are things that typically can't be changed or modified. Health experts frequently refer to these factors as *nonmodifiable determinants*. Genetically inherited traits include genetic disorders such as sickle cell disease, hemophilia, and cystic fibrosis, as well as predispositions to certain conditions—such as allergies and asthma, cardiovascular disease, diabetes, and certain cancers—that are linked to multiple gene variants in combination with environmental factors. Although we cannot influence the structure of our genes, the emerging field of *epigenetics* is increasingly linking aspects of our diet, physical activity, and other behavioural choices to our cells' ability to use our genes to build proteins that influence our health. In the future, research into epigenetics might help us gain more control over our genetic inheritance.

Nonmodifiable determinants also refer to certain innate characteristics, such as your age, race, ethnicity, metabolic rate, and body structure. Your sex is another key biological determinant: As

7 OUT OF 10

deaths are caused by **CHRONIC DISEASE.**

Source: Centers for Disease Control and Prevention, 2016a



Figure 1.4 What is health? Four leading causes of chronic disease in the United States: Lack of physical activity, poor nutrition, excessive alcohol consumption, and tobacco use—all modifiable health determinants—are the four most significant factors leading to chronic disease among Americans today.

Source: Grantly Lynch/UK Stock Images Ltd/Alamy Stock Photo; Stray\_Cat/E+/Getty Images; Webphotographeer/E+/Getty Images; Yeko/Shutterstock

compared to men, women have an increased risk for low bone density and autoimmune diseases (in which the body attacks its own cells), whereas men have an increased risk for heart disease compared to women. Your own history of illness and injury also classifies as biology. For instance, if you had a serious knee injury in high school, it may still cause pain with walking and exercise, which in turn may predispose you to weight gain.

### Social factors

Social factors include both the social and physical conditions in the environment where people are born or live. Disparities in income and education, exposure to crime and violence, the availability of healthful foods, the state of buildings and roads, occupational hazards, the quality of air, soil, and water, and even climate are all examples.

#### ❁ Economic factors

Even in affluent nations such as the United States, people in lower socioeconomic brackets have, on average, substantially shorter life expectancies and more illnesses than do people who are wealthy (U.S. Department of Health and Human Services, 2016a). Economic disadvantages that can impair health include the following:

- Lacking access to high-quality education from early childhood through adulthood
- Living in poor housing with potential exposure to asbestos, lead, dust mites, rodents and other pests, inadequate sanitation, unsafe drinking water, and high levels of crime
- Being unable to pay for nourishing food, warm clothes, and sturdy shoes; heat and other utilities; medications and medical supplies; transportation; and counselling, fitness classes, and other wellness measures.

#### ❁ The built environment

As the name implies, the *built environment* includes anything created or modified by human beings, including buildings, roads, recreation areas, transportation systems, electric transmission lines, and communications cables.

Researchers in public health have increasingly been promoting changes to the built environment that can improve the health of community members (Pilkington, Powell & Davis, 2016). These include increased construction of parks, footpaths, pedestrian-only areas, bike paths, and public transit systems to which commuters typically walk or bike. Some communities are enticing supermarkets to open in inner-city neighbourhoods to increase residents' access to fresh fruits and vegetables.

### ❁ *Pollutants and infectious agents*

Physical conditions also include the quality of the air we breathe, our land, our water, and our foods. Exposure to toxins, radiation, and infectious agents via the environment can cause widespread harm in a region and, with the rise of global travel and commerce, can affect the health of people around the world. Recent outbreaks of the Ebola and Zika viruses, for example, are grim reminders of the need for a proactive international response for disease prevention and climate change.

### *Policymaking*

Public policies and interventions can have a powerful and positive effect on the health of individuals and communities. Examples include policies that ban smoking in public places, policies that require people to be vaccinated before enrolling in classes or to wear helmets while riding bicycles or motorcycles, and laws that ban mobile phone use, drinking, and smoking while driving. Health policies serve a key role in protecting public health and motivating individuals and communities to change.

Access to high-quality, low-cost health services is also affected by policymaking, including health insurance legislation.<sup>B</sup>



Photo 1.3 The built environment of your community can promote positive health behaviours. Wide bike paths, good signage and lighting, and major thoroughfares that are closed to automobile traffic encourage residents to safely incorporate healthy physical activity into their daily lives.

Source: Karl Weatherly/Getty Images

## Behaviour and health

The dramatic increases in life expectancy witnessed in Western countries, including Australia, in the twentieth century (partially due to advances in medical technology and treatments) led to a general belief—in Western cultures at least—in the efficacy of traditional medicine and its power to eradicate disease. This was most notable following the introduction of antibiotics in the 1940s; although Fleming discovered penicillin in 1928, it was some years before it and other antibiotics were generally available. Such drug treatments, alongside increased control of infectious disease through vaccination and improved sanitation, are partial explanations of Australian life expectancy at birth increasing from 55 years in 1900 (Kinsella, 1992) to 80.3 for men and 85.2 for women in 2014 (AIHW, 2016), figures that place us seventh among OECD countries in terms of longevity. Unfortunately, the picture is not so rosy for indigenous Australians. While there are many deficiencies in data collection about Aboriginal and Torres Strait Islander people, including problems in defining and recording indigenous status, the best estimates are that both indigenous men and women live around 10 years less than same gender non-indigenous Australians. As such, an Aboriginal or Torres Strait Islander born in 2010–2012 is expected to live until 69 for men and 73.7 years for women (AIHW, 2016). These cultural variations can be explained to a large extent by differences in lifestyle and diet. In fact, much of the fall in mortality seen in the developed world preceded the major immunisation programs and therefore it is the wider social and environmental changes, such as developments in education and agriculture, which led to changes in diet, or the development of sewerage and waste disposal systems, which are mainly responsible for improved public health (see also Chapter 11).

One hundred years ago, the 10 leading causes of death worldwide were infectious diseases such as tuberculosis and pneumonia, with diseases such as diphtheria and tetanus highly common. If people living then had been asked what they thought being healthy meant, they may have replied ‘avoiding infections, drinking clean water, living into my 50s/60s’. Death was frequently a result of highly infectious disease becoming epidemic in communities unprotected by immunisation or adequate sanitary conditions. However, in the last century, at least in developed countries, there has been a downturn in deaths resulting from infectious disease, and the ‘top killers’ make no mention of tuberculosis, typhoid or measles but instead list, for example, heart and lung disease, cancer and suicide. Table 1.1 shows the leading ‘physical’ causes of mortality in 2016 for Australian men and women (ABS, 2017).

Of note, the most common causes of death in Aboriginal people in Australia vary in many respects from those of non-indigenous Australians (ABS, 2017; see Table 1.2). Accidents, accidental poisoning and suicide are all on the list, as are cirrhosis and liver disease.

**Table 1.1 Ten leading causes of death in Australian men and women in 2016**

Men	Women
1. Ischaemic heart disease	1. Dementia, including Alzheimer’s disease
2. Trachea and lung cancer	2. Ischaemic heart disease
3. Dementia, including Alzheimer’s disease	3. Cerebrovascular diseases
4. Cerebrovascular diseases	4. Chronic lower respiratory diseases
5. Chronic lower respiratory diseases	5. Trachea and lung cancer
6. Prostate cancer	6. Breast cancer
7. Colon and rectum cancer	7. Colon and rectum cancer
8. Diabetes	8. Diabetes
9. Blood and lymph cancer (including leukaemia)	9. Influenza and pneumonia
10. Suicide	10. Heart failure

Source: Australian Bureau of Statistics. (2017). *Causes of death, Australia* (Catalogue No. 3303.0). Canberra: ABS.

**Table 1.2 Most common causes of death in Aboriginal Australians (NSW, Qld, SA, WA and the NT), 2016**

1. Ischaemic heart disease
2. Diabetes
3. Chronic lower respiratory diseases
4. Trachea and lung cancer
5. Suicide
6. Cerebrovascular diseases
7. Cirrhosis and liver disease
8. Accidents
9. Accidental poisoning
10. Dementia, including Alzheimer's disease

Source: Australian Bureau of Statistics. (2017). *Causes of death, Australia* (Catalogue No. 3303.0). Canberra: ABS.

Many of the most common causes of death today have a behavioural component in that they have been linked to behaviour such as smoking, excessive alcohol consumption, increasingly sedentary lifestyles and poor diet. It has been estimated that between a third and half of cancer deaths are attributable, in part at least, to our behaviour (Vineis & Wild, 2014).

The upturn in cancer deaths over the last 100 years is in part because people are living longer with illnesses they previously would have died from; thus they are reaching ages where cancer **incidence** is greater. Nonetheless, a person's own behaviour does increase such disease risk significantly. Death rates from many of the top killers are slowly falling in most Western countries due to effective public health campaigns targeting behaviours such as smoking, and improvements in treatment. However, one disease which is not following this trend is diabetes. In Australia, the number of adults with diabetes has more than doubled since 1981 (International Diabetes Institute, 2006). The prevalence of diabetes is growing at a rate that is faster than any other chronic illness. Perhaps this reflects what has been described as the 'obesity' epidemic (see Chapter 7). Of note, diabetes is particularly prominent in the Aboriginal community, featuring second in the list of most common causes of death (see Table 1.2).

Worldwide, the leading causes of death differ. In 2000, in addition to those causes of death that are common in Australia (e.g. ischaemic heart disease, respiratory conditions and cancer) globally the top 10 causes of death also included preterm birth complications and birth trauma, HIV/AIDS, tuberculosis and diarrhoeal disorders. In 2015, HIV/AIDS and preterm birth and other complications are no longer cited as top 10 causes of death globally, indicating improvements in both the management of HIV/AIDS and improvements in maternal perinatal care. Despite these improvements, the World Health Organization (2014) has cited life expectancy in nine sub-Saharan African countries as still being under 55 years.

It might be expected, given the changes in what people are dying from, that views of what health is may also have changed over time. In the eighteenth century, health was considered an 'egalitarian ideal', aspired to by all and considered as potentially being under an individual's control. Doctors were available to the wealthy as 'aids' to keeping oneself well. However, by the mid-twentieth century this had changed. New laws regarding sickness benefits, and medical and technological advances in diagnostic and treatment procedures are associated with health being inextricably linked to 'fitness to work'. Doctors were required to declare whether individuals were 'fit to work' or whether they could adopt the 'sick role'. Many today continue to see illness in terms of its effects on their working lives, although some also look at work role and conditions and consider the effects it has on illness.

Another change is seen in the challenges to the assumption that traditional medicine can, and will, cure us of all ills. Over recent decades, many more people have acknowledged the potential negative consequences of some treatments, particularly pharmacological ones (consider, for example, the long-term use of anxiolytics such as Valium), and as a result the 'complementary' and 'alternative' medicine industry has burgeoned.

#### incidence

The number of new cases of disease occurring during a defined time interval—not to be confused with prevalence, which refers to the number of established cases of a disease in a population at any one time.

# Individual, cultural and lifespan perspectives on health

## Lay theories of health

If a fuller understanding of health and illness is to be attained, it is necessary to find out what people think health and illness are. The simplest way of doing this is to ask them. Here we explore lay perceptions of health.

In response to the question ‘What does being healthy mean?’ a classic early study by Baumann (1961) found that people with diagnoses of quite serious illness made three main types of response, whereby being healthy was considered to be:

1. a ‘general sense of wellbeing’
2. identified with ‘the absence of symptoms of disease’
3. seen in ‘the things that a person who is physically fit is able to do’.

She argued that these three types of response reveal health to be related to:

- feeling
- symptom orientation
- performance.

Respondents in this study did not answer in discrete categories however, with nearly half of the sample providing two of the above response types, and 12% using all three types. This highlights the fact that the way we think about health is often multifaceted. A word of caution is also needed before generalising from these findings. Baumann’s sample consisted of patients with diagnoses of quite serious disease, and it is likely that healthy people will think about health in a different way.

It has been shown that factors such as current health status do influence subjective views of health and reports of what ‘health is’. For example, among almost 500 elderly people asked to rate factors in order of importance to their subjective health judgements, the most important factors emerging related to physical functioning and vitality (being able to *do* what you need/want to do). However, the current health status of the sample (poor/fair; good; very good/excellent) influenced judgements; for example, those in poor/fair health based their health assessment on recent symptoms or indicators of poor health, whereas those in good health considered more positive indicators (being able to exercise, being happy). Consistent with this, subjective health judgements were more tied to **health behaviour** in ‘healthier’ individuals (Benyamini, Leventhal & Leventhal, 2003).

Although some people have been shown to find it hard to distinguish health from an absence of illness, health is generally viewed as a state of equilibrium across various aspects of the person, encompassing physical, psychological, emotional and social wellbeing (e.g. Herzlich, 1973). Bennett (2000, p. 67) considers these representations of health to distinguish between health as ‘being’—if not ill, then healthy; ‘having’—health as a positive resource or reserve; and ‘doing’—health as represented by physical fitness or function (as seen in Benyamini et al.’s study, above). Baumann’s respondents appear to have focused more on the ‘being’ healthy and ‘doing’ aspects, which may be in part because ‘having’ health as a resource was not prominent in the minds of her patient sample. Similarly, Krause and Jay (1994) found that older respondents more often referred to health *problems* when making their appraisals, whereas younger respondents referred to health *behaviour*. The frames of reference drawn on by people asked to evaluate their own health status therefore also differ.

It does seem that health is considered differently when it is no longer present; it is considered to be good when nothing is wrong (perhaps more commonly thought in older people) and when a person is behaving in a health-protective manner (perhaps more commonly thought in younger people).

A more representative picture of the health concept is perhaps obtained from a large, questionnaire-based *Health and Lifestyles* survey of 9003 members of the general public, of whom 5352 also completed an assessment seven years later (Cox, Huppert & Whichelow, 1993). This survey asked respondents to:

- Think of someone you know who is very healthy.
- Define who you are thinking of (friend/relative etc.—do not need specific name).
- Note how old they are.

### health behaviour

Behaviour performed by an individual, regardless of their health status, as a means of protecting, promoting or maintaining health (e.g. diet).



- Consider what makes you call them healthy.
- Consider what it is like when you are healthy.

About 15% could not think of *anyone* who was ‘very healthy’, and about 10% could not describe what it was like for them to ‘feel healthy’. This inability to describe what it is like to feel healthy was particularly evident in young males, who believed health to be a norm, a background condition so taken for granted that they could not put it into words. By comparison, a smaller group of mostly older women could not answer for exactly the opposite reason—they had been in poor health for so long that either they could not remember what it was like to feel well or they were expressing a pessimism about their condition to the interviewer (Radley, 1994, p. 39). The categories of health identified from the survey findings were:

- *Health as not ill*: that is, no symptoms, no visits to the doctor, therefore I am healthy.
- *Health as reserve*: that is, come from strong family, recovered quickly from an operation.
- *Health as behaviour*: usually applied to others rather than self; for example, they are healthy because they look after themselves, exercise, etc.
- *Health as physical fitness and vitality*: used more often by younger respondents and often in reference to a male—male health concept more commonly tied to ‘feeling fit’, whereas females had a concept of ‘feeling full of energy’ and rooted health more in the social world in terms of being lively and having good relationships with others.
- *Health as psychosocial wellbeing*: health defined in terms of a person’s mental state, for example, being in harmony, feeling proud or, more specifically, enjoying others.
- *Health as function*: the idea of health as the ability to perform one’s duties, that is being able to do what you want when you want without being handicapped in any way by ill health or physical limitation (relates to the World Health Organization’s concept of *handicap*, now described as participation/participatory restriction—an inability to fulfil one’s ‘normal’ social roles).

### psychosocial

An approach that seeks to merge a psychological (more micro- and individually oriented) approach with a social approach (macro-, more community and interaction oriented), for example, to health.

Such findings suggest that health concepts are perhaps even more complex than initially thought, with evidence that the presence of health is considered as something more than physical and encompassing of psychosocial wellbeing as well. Categories found seem to fit with Herzlich’s ‘being’ and ‘doing’ categorisations (see Bennett, 2000, p. 66) and Baumann’s findings of clusters of beliefs in ‘health as not ill’. Generally, we can conclude that these dimensions of health are fairly robust (at least in Western culture; see later section for culture differences).

It is worth noting that subjective wellbeing ratings have been found to correlate strongly with objective health indicators (e.g. blood pressure and heart rate; Steptoe, Demakakos & de Oliveira, 2012) and also with wealth and educational levels (White, 2007). We note that health is only one component of these typically self-rated concepts. What is relevant here, however, is that subjective evaluations are typically reached through comparison with others, and in this way one’s concept of what health is, or is not, can be shaped. For example, Kaplan and Baron-Epel (2003) found that young Israelis reporting suboptimal health did not compare themselves with people of the same age, whereas many older people in suboptimal health did. When in optimal health, more young people than old compared themselves with people their age. This is interpreted as evidence that people try to get the best out of their evaluations—a young person will tend to perceive their peers as generally healthy, so if they feel that they are not, they will be less likely to draw this comparison. In contrast, older people in poorer health are more likely to compare themselves with same-aged peers, who may generally be thought to have normatively poorer health (thus their own health status seems less unusual). Asking a person to consider what it is that they would consider as ‘being healthy’ inevitably will lead people into making these types of comparisons. Health is a relative state of being.

### World Health Organization definition of health

The dimensions of health described in the preceding paragraphs are reflected in the WHO (1947) definition of health as a ‘state of complete physical, mental and social wellbeing and . . . not merely the absence of disease or infirmity’. This definition saw individuals as ideally deserving of a positive state—an overall feeling of wellbeing and fully functioning. This standpoint informed and helped shape global health targets, including their own Global Strategy for Health for All by

the Year 2000 (WHO, 1981) and in 1998 the ‘Health21—Health for all in the 21st century’ declarations. Each of these had the aim of securing health security for all, global health equity, increased life expectancy and access for all to essential healthcare. Many national policy documents followed, with the nature, specificity and time frame of targets varying from country to country. In general, however, these set targets for reductions in deaths from the leading causes of cancers, heart disease, lung disease, strokes and more explicitly targeted the associated behaviours. For example, in England *The Health of the Nation* white paper, (Department of Health, 1992) and the *Saving Lives: Our Healthier Nation* report (Department of Health, 1999) and in the Netherlands *Langer Gezond Leven [Towards a Longer and Healthier Life]* (Ministry of Health, Welfare & Sport, 2003), the targets were disease incidence reductions, whereas in Belgium the targets were more behavioural: reducing smoking behaviour, fat intake, fatal accidents, increasing uptake of vaccination programs and increasing health screening in the over-50s. In Australia, the National Health Priority Areas (NHPAs) initiative was Australia’s response to the World Health Organization’s global strategy. The initial 1996 set of NHPAs included cardiovascular health, cancer control, injury prevention and control, and mental health. Diabetes mellitus was added in 1997, followed by asthma in 1999, arthritis and musculoskeletal conditions in 2002, and obesity in 2008 (AIHW, 2011). While these areas were targeted, specific goals and time frames were not specified.

### *Cross-cultural perspectives on health*

What is considered to be ‘normal’ health varies across cultures and is a result of the economic, political and cultural climate of the era in which a person lives. Cultures vary in their health belief systems, health attributions and health practices. Think of how pregnancy is treated in most Western civilisations (i.e. medicalised) as opposed to many developing regions (naturalised). The stigma of physical disability, mental illness or of dementia among South Asian communities may have consequences for the family which would not be considered in Caucasian families; for example, having a sibling with a disability, or a relative with dementia or depression, may affect siblings’ marriage chances or even the social standing of the family (Ahmad, 2000; Mackenzie, 2006; Moriarty, Sharif & Robinson, 2011). The way in which certain behaviour is viewed also differs across time and between cultures. For example, alcohol dependence has shifted from being regarded as a legal and moral problem with abusers seen as deviant, to being a disease treated in clinics; and smoking has shifted from being considered as glamorous and even desirable to being socially undesirable and indicative of a weak will. Perhaps reflecting this shift, the prevalence of Australian males who smoke has steadily declined since 1945 (when 75% of men smoked) to 2007 (only 21%). Similarly, rates have declined overall for women from 26% in 1945 to 18% in 2007, although rates for women increased to 33% in 1976, before starting to decline (QuitVictoria, 2011; and see Chapter 5).

Westernised views of health differ in various ways from conceptualisations of health in non-Westernised civilisations. Chalmers (1996) astutely notes that Westerners divide the mind, body and soul in terms of allocation of care between psychologists and psychiatrists, medical professions and the clergy, whereas in some African cultures, these three ‘elements of human nature’ are integrated in terms of how a person views them, and in how they are cared for. This **holistic** view is similar to that found in Eastern and in Aboriginal Australian cultures (e.g. Swami et al., 2009) where the social (e.g. social and community norms and rituals) as well as the biological, the spiritual and the interpersonal, are integral to explaining health and illness states.

Spiritual wellbeing as an aspect of health has gained credence following inclusion in many quality-of-life assessments and, although faith or God’s reward may sometimes be perceived as supporting health, attributing one’s health to a satisfied ancestor may nonetheless raise a few eyebrows if stated aloud. Negative supernatural forces such as ‘hexes’ or the ‘evil eye’ sometimes share the blame for illness and disability; for example, Jobanputra and Furnham (2005) found that, when compared with British Caucasians, British Gujarati Indian immigrants more often endorsed such causes of illness. Among Hindus and Sikhs, in particular, it has been reported that disability, and even dementia, may be considered a punishment for past sins within the family (Katbamna, Bhakta & Parker, 2000; Mackenzie, 2006). Such belief systems can have profound effects on living with illness or, indeed, caring for someone with an illness or disability.

#### **holistic**

Root word ‘wholeness’; holistic approaches are concerned with the whole being and its wellbeing, rather than addressing the purely physical or observable.

**collectivist**

A cultural philosophy that emphasises the individual as part of a wider unit and places emphasis on actions motivated by collective, rather than individual, needs and wants.

**individualistic**

A cultural philosophy that places responsibility at the feet of the individual; thus behaviour is often driven by individual needs and wants rather than by community needs or wants.

In addition to beliefs of spiritual influences on health, studies of some African regions consider that the community or family work together for the wellbeing of all. This **collectivist** approach to staying healthy and avoiding illness is far different from our **individualistic** approach to health (consider how long the passive smoking evidence was ignored). Generally speaking, Western European cultures are found to be more individualistic, with Eastern and African cultures exhibiting more holistic and collectivist approaches to health. For example, in a study of preventive behaviour to avoid endemic tropical disease in Malawians, the social actions to prevent infection (e.g. clearing reed beds) were adhered to more consistently than the personal preventive actions (e.g. bathing in piped water or taking one's dose of chloroquine) (Morrison, Ager & Willock, 1999).

Several Eastern cultures (Japanese, Chinese) also exhibit holistic and collectivist approaches to health. For example, a review of the literature on coronary heart disease in Chinese Australians (Daly et al., 2002) found Chinese people are less inclined to express individual needs unless they are encouraged to and that they may appear to passively accept illness as this allows 'fate' to take its course. (For information about collectivism in the Australian health context, see Körner, 2007.) Following a comparative study of Canadian and Japanese students, Heine and Lehman (1995) highlighted a need to distinguish between cultures that promote and validate 'independent selves' (i.e. find meaning through uniqueness and autonomy), and cultures that promote and validate 'interdependent selves' (i.e. find meaning through links with others and one's community) (Morrison, Ager & Willock, 1999, p. 367). Cultures that promote an interdependent self are more likely to view health in terms of social functioning rather than simply personal functioning, fitness and so on. Several research studies by George Bishop and colleagues (e.g. Quah & Bishop, 1996; Bishop & Teng, 1992) have noted that Chinese Singaporean adults view health as a harmonious state where the internal and external systems are in balance, and on occasions where they become imbalanced, health is compromised. Yin—the positive energy—needs to be kept in balance with the Yang—the negative energy (also considered to be female!). Eastern cultures hold spiritual beliefs about health and illness, with illness or misfortune commonly being attributed to predestination.

With respect to Aboriginal and Torres Strait Islander people, it has been suggested that compared to Western conceptions of health a more holistic belief of health is shared. The body is seen as the locus of social relationships and therefore health cannot be separated from community, spiritual and other elements of identity (for more information on Aboriginal health beliefs see Maher, 1999). This is important, because Aboriginal people, when asked about their views of cancer, indicated a number of misunderstandings including that cancer was contagious or had spiritual implications, and these beliefs were found to be a barrier for accessing medical treatment in cancer-related services (Shahid, Finn, Bessarab & Thompson, 2009).

Clearly, therefore, to maximise effectiveness of health promotion efforts, it is important to acknowledge the existence and effects of such different underlying belief systems and resultant behaviours (Ypinazar, Margolis, Haswell-Elkins & Tsey, 2007). It is worth noting that variations exist within, not just between cultures, especially where there may have been exposure to multiple cultural influences (Tov & Diener, 2007). This is also reported by Wong, Ho, Shin and Tsai (2011) from studies in Singapore where both Asian and Western influences coexist but have differential effects on subjective wellbeing ratings.

In the Western world, the perceived value of alternative remedies for health maintenance or treatment of symptoms is seen in the growth of alternative medicine and complementary therapy industries, however, Western medicine dominates. In contrast, in non-Western countries a mixture of Western and non-medical/traditional medicine can be found. For example, in sub-Saharan Malawi, a person may visit a faith healer or a herbalist as well as a local Western clinic for antibiotics (Ager, Carr, MacLachlan & Kaneka-Chilongo, 1996) and in Malaysia, while Western-style medicine is dominant, traditional medicine practice by 'bomohs' (faith healers) is still available (Swami et al., 2009). Similarly, among some Aboriginal tribes spiritual beliefs in illness causation coexist with the use of Western medicines for symptom control (Devanesen, 2000).

However, one study reported that some Aboriginal Australians still use traditional medicine for treating their cancer. Such healing processes and medicines were preferred by some because it helped reconnect them with their heritage, land, culture and the spirits of their ancestors, bringing peace of mind during their illness. Spiritual beliefs and holistic health approaches and practices played an important role in the treatment choices for some patients (Shahid, Bleam, Bessarab & Thompson, 2010).



Photo 1.4 Visiting a herbalist to choose individually tailored remedies.

Source: Corbis Premium RF/Alamy Images

These examples illustrate that the biomedical view is acknowledged and assimilated within different culture's belief systems, and show that, while access to and understanding of Western medicine and its methods and efficacy grows, better understanding of culturally relevant cognitions regarding illness and health behaviour is needed (see Kitayama & Cohen, 2007; Vaughn, Jacquez & Baker, 2009). We need more research which considers the role religion plays in health across and within cultures. Swami et al. (2009), for example, in their study of 721 Malaysian adults, found that Muslim participants had higher beliefs in religious factors and fate as influences on recovering from illness than did Buddhist or Catholic participants and they were also more likely to believe that their likelihood of becoming ill was uncontrollable.

The use of healthcare, either traditional or Western, will in part be determined by the nature and strength of such cultural values and religious beliefs. Illness discourse will reflect the dominant conceptualisations of individual cultures and religions and, in turn, how people think about health and illness will shape expectations, behaviour, and use of health promotion and healthcare resources. Furthermore, what is normal (or deviant) and what is defined as sick (reflecting illness) in a given culture can have consequences for how others respond: consider how societal responses to illicit drug use have ranged from prohibition through criminalisation to an illness requiring treatment.

### *Lifespan, ageing and beliefs about health and illness*

Psychological wellbeing, social and emotional health are affected by illness, disability and hospitalisation, which can be experienced at any age. Although growing older is associated with decreased functioning and increased disability or dependence, it is not simply older people who experience longstanding illness, as evidenced the National Health Survey, which found that 12% of children aged between 0 and 14 had asthma and another 17.5% had mental or behavioural problems (ABS, 2016). There are developmental issues which health professionals should be aware of if they are to promote the physical, psychological, social and emotional wellbeing of their patient or client. While the subsequent section introduces lifespan issues in relation to health perceptions, it is