1

Public health: an introduction to local and global contexts

Pranee Liamputtong

Learning objectives

After studying this chapter, you should be able to:

- understand what public health is
- appreciate the health of Australian people
- learn about the main public health organisations in Australia
- understand some global public health concerns
- learn about the social model of health and the new public health
- understand health inequality and social justice in health.

Breastfeeding and HIV-positive children: is it a public health issue?

Globally, more than 1500 unborn or newborn babies are infected with HIV every day. Most of these children are born in poor nations, particularly in sub-Saharan Africa, and will die before they reach their fifth birthday. Approximately 40% of HIV-positive children are infected through breastfeeding. This makes breastfeeding the most widespread means of mother-to-child transmission (MTCT) of HIV. For HIV-positive mothers who practice prolonged breastfeeding, the risk of MTCT HIV spans from 25 to 48% (Nassalia et al., 2009).

The transmission of HIV through breast milk has created a dilemma for HIV-positive mothers. Often, the benefits of breastfeeding as well as the risks of not breastfeeding must

be considered against the risk of HIV transmission through breastfeeding (Liamputtong, 2013a). Indeed, public health specialists and healthcare workers in many resource-poor settings have been greatly challenged by the infant feeding dilemma posed by HIV.

As part of the prevention of mother-to-child HIV transmission, HIV-positive women have been asked to select one of two options for the feeding of their infant: exclusive breastfeeding with early weaning, and replacement feeding (with breast-milk substitutes) (Desclaux & Alfieri, 2009). These options may be feasible for women who can afford to do so, but for many HIV-positive mothers residing in resource-poor nations, who also practice prolonged breastfeeding due to economic, social and/or cultural grounds, asking them to adopt exclusive replacement feeding with their infants can be problematic and a challenge indeed (Liamputtong, 2013a).

Very often, too, women living with HIV/AIDS are advised not to breastfeed their infants. Most of these mothers are from poor backgrounds, and their poverty has a great impact on their feeding practices (Liamputtong, 2011, 2013a). In poor nations, where sanitary conditions are not good, this can be much more difficult as unsuitable handling of infant formula may result in dehydration and diarrhoeal disease, which are major causes of infant mortality (Desclaux & Alfieri, 2009). According to Maru and colleagues (2009, p. 1114), in settings where there is poor access to clean water and sanitation, such as those in sub-Saharan Africa, HIV-positive mothers are confronted with 'the choice of breastfeeding, which confers an increased risk of HIV, or formula feeding, which increases the risk of malnutrition, respiratory tract infections, and diarrheal diseases'.

Introduction

The health of the public is determined by a spectrum of complex individual, social, cultural, economic and environmental factors (White, Stallones & Last, 2012; Australian Institute of Health and Welfare, 2014). This has been attributed to **determinants of health** (Marmot, 2004; Liamputtong, Fanany & Verrinder, 2012; Commission on Social Determinants of Health, 2014; see also the chapters in parts 1 and 2). Determinants of health include genetic and biological factors; socio-cultural and socio-economic factors (including social class, gender, ethnicity, education, income and occupation); health behaviours (such as cigarette smoking, abuse of alcohol and risky lifestyles); and environmental factors (for example, social support, social connection, housing, geographical position and climate). The determinants of health can lead to a change (either for the better or worse) in the health and wellbeing of individuals, groups and populations (Liamputtong et al., 2012; Commission on Social Determinants of Health, 2014).

Determinant of health
a factor within and external to the individual that determines their health; the specific social, economic and political circumstances into which individuals are born and live.

Based on the **new public health** concept, it is argued that public health practice is situated within the context of broader social issues concerning the underlying social, economic, cultural, environmental and political determinants of health and disease. Thus, this book has its emphasis on the socio-cultural environment rather than the biological and genetic factors. As illustrated in the opening case study, the ongoing HIV/AIDS epidemic in the past few decades has created a significant challenge for public health practice. It illustrates the complex social issues that are fundamental elements of public health (Schneider, 2014).

This chapter introduces **public health** and the salient issues relevant to it from local and global perspectives. The definition of public health, its values and major public health organisations are included. The chapter also discusses major public health challenges in Australia and from a global context. The social model of health, health inequalities and social justice are also discussed.

New public health the concept of public health that moves from behavioural change to healthy public policy, and focuses on the concept of life-skill enhancement. It also addresses inequalities in health in the population.

Public health the health of the public, the health profession, the health services, the healthcare system, and the knowledge and techniques used to alleviate suffering and disability.

What is public health?

Definition of public health

Public health means different things to different people (Turnock, 2012; Lin, Smith & Fawkes, 2014; White et al., 2014). Public health may refer to the health of the public, the health profession, the health services, the healthcare system, and appropriate knowledge and techniques (Turnock, 2012). Regardless of how it is seen, public health aims to promote and improve the health of all people and to prevent injury, disease and premature death. Public health also attempts to alleviate suffering and disability (White et al., 2012). Within the Australian context, public health is also about the prevention of illness, disease and injury as well as the promotion of health, wellbeing and quality of life of people (Fleming & Parker, 2012).

It is here that the definition of health needs to be discussed. Health is 'socially and culturally constructed' (Taylor 2008, p. 5). According to the Australian Institute of Health and Welfare (2014), health is seen as a crucial component of wellbeing. Health is also situated within broad social and cultural contexts. The state of health of populations in the society also contributes to the social and economic wellbeing of that particular society. Overall, health is perceived as 'a complex outcome' that is influenced by factors including genetic, environmental, economic, social and political circumstances (Baum, 2015).

While medicine has its focus on treating individuals who are ill, public health emphasises illness prevention and health improvement of people (Schneider, 2014). Due to its focus on prevention, the achievements of public health attempts are more difficult to recognise. This is why the value of public health tends not to be as appreciated as that of medicine. However, most health gains are the result of public health

attempts such as better nutrition, housing, sanitation and occupational safety (see Chapter 2). According to Schneider (2014), effective public health programs not only save lives but also save money on medical costs. Essentially, public health contributes to the health of people more than medicine can do (Turnock, 2012; Schneider, 2014). Globally, public health efforts have contributed significantly to the improvement in health status of populations. It will continue to play an important role with new challenges that we face in the future (Turnock, 2012).

Preventive measures in public health can be applied at three levels: primary, secondary and tertiary. Primary prevention focuses on the prevention of a disease or injury. This includes, for example, anti-smoking campaigns, seat belts in motor vehicles, prohibition of driving after alcohol consumption (drink driving campaigns) and nutrition programs. Secondary prevention attempts to reduce the damage caused by the illness through screening programs (for instance, breast, bowel and prostate cancer screening programs). Secondary prevention also includes the reduction of injury-causing events that may happen. Tertiary prevention aims to minimise any disability that might follow and is done through the provision of medical care and rehabilitation services (Fleming & Parker, 2012; Schneider, 2014).

Public health disciplines

Commonly, there are five main disciplines under the umbrella of public health. Biostatistics is the application of statistics to biological and medical issues of public health. Epidemiology refers to the study of the determinants and distribution of health issues within specific groups of the population (see Chapter 10). Environmental and occupational health sciences deal with a range of environmental determinants of health including physical, biological, social and behavioural determinants, as well as with diseases with environmental and occupational origins. Health services administration is concerned with the function of public health practitioners in ensuring that health services are equitably distributed, and checking if policies are implemented and if they work as planned. It also plays a crucial role in evaluating costs related to public health programs and medical care (White et al., 2014)

Social and behavioural sciences encompass the application of health education and health promotion to protect the health of the people (White et al., 2014). Social and behavioural sciences facilitate the understanding of how society and its cultural and belief systems influence health perceptions and behaviours of individuals and groups (Liamputtong et al., 2012; Lin et al., 2014). Schneider (2014, p. 10) points out that social and behavioural sciences have increasingly become major components of public health. More and more people in modern societies have to deal with disease caused by the social environment and their own behaviour. Some population groups have poorer health overall than others and the main reasons are related to social factors. For example, people from low socio-economic groups tend to be less healthy than those with a higher income. People of ethnic minority groups, including indigenous people, immigrants and refugees, are at higher risk for many health issues (Schneider, 2014;

see chapters 16 and 17). Additionally, many forms of cancer are caused by smoking; heart disease is linked with exercise patterns and nutrition; drugs and alcohol abuse have killed many individuals; and violence is a significant cause of death in many societies (see also chapters 5 and 6). These issues are beyond what biomedical sciences can answer. It is likely that the social and behavioural sciences will make a significant difference to public health policies and practice in the future (Schneider, 2014). Although modern public health still deals with sanitation and disease control, more attention is paid to social determinants of health: 'how the social and behavioural lives of people can affect their health status' (Lin et al., 2014, p. 81). As the complexity of health patterns increases, the scope of public health interest is widened. This is particularly true in recent times with the many public health challenges that we have witnessed.

Spotlight 1.1 Sex ratios and son preference in Asia

Sex ratios are influenced by social factors such as large-scale migration, gender-related health patterns, violent conflicts, and changing ethnic and racial composition in a country. In Asia, sex ratios have been influenced by long-standing cultural preferences and social practices that prefer the birth and survival of male children over females (UNFPA, 2011). In East Asia, the male-to-female sex ratio at birth began to increase between 1980 and 1985, and in South-Central Asia between 1985 and 1990. Elsewhere in Asia, the ratio has remained relatively stable (UNFPA, 2011). Preferred sex ratios vary between religious, ethnic and socio-economic groups. In some settings, such as Guangdong and Hainan in China, the ratio exceeds 1.30:1. The deeply rooted preference for male children is formed due to a number of factors including 'social customs, marriage costs, and old-age support', which prompt parents to 'decide against allowing a girl to live, even before birth' (White et al., 2014, p. 113). Following the introduction of modern technologies such as ultrasound and amniocentesis, in the late 1970s prenatal sex selection became available in many Asian countries. We thus have witnessed an increase in sex ratios in many Asian countries. What is the significance of this imbalance in male-to-female sex ratios and of son preference? Nowadays, men of marriageable age have difficulty finding their potential brides because there is a shortage of eligible women. More importantly, girls and women of all ages bear the burden of this phenomenon. There has been an increase in the incidents of abduction, trafficking, discrimination and gender-based violence. These make girls and women in many parts of Asia extremely vulnerable in many aspects of their lives. The implications of sex preference will continue for decades to come (White et al., 2014).

Questions

1 In your view, why is gender imbalance a public health issue?
2 Why is knowledge about this socio-cultural issue important for public health practitioners?

Public health in the Australian context

The health of Australian people

Overall, Australia is doing well with the health of the public. Australia is one of the countries that enjoy the highest levels of life expectancy in the world. From the beginning of the 20th century, the picture of health in Australia has dramatically changed. Since 1901, infant and child mortality has decreased significantly. This has contributed greatly to the increased life expectancy of Australian people (Australian Institute of Health and Welfare, 2014). Death rates have declined substantially across all age groups. In the last two decades, Australian life expectancy at birth is located within the top 10 of OECD countries. According to the Australian Institute of Health and Welfare (2014), average life expectancy at birth is 84.2 years for women and 79.7 years for men. Australian people also enjoy longer years of living free of disability (Australian Institute of Health and Welfare, 2014). According to Germov (2014a), this health improvement is not due to the biological advantage of Australian people; instead, it is 'a reflection of our distinctive living and working conditions' (p. 6). Generally, better living conditions of people, as well as improved public health and safety programs and improved medical care, contribute to the reduction of mortality in Australia (Lin et al., 2014).

However, among some population groups there are a number of public health issues that need significant improvement. These groups include people from lower socio-economic backgrounds, Indigenous people, people with disabilities, older people, migrants and refugees, and people living in rural and remote areas (Australian Institute of Health and Welfare, 2014). The health issues of most of the population groups mentioned above are covered in the chapters in Part 4.

Key public health organisations in Australia

Public health is closely linked with government, and its processes are intrinsically political. Public health also involves a number of workforces who share a common goal to improve the health of the public (National Public Health Partnership, 1998; Lin et al., 2014). These characteristics are complex and necessitate the commitments and skills of different professions from different disciplines (Fleming & Parker, 2012). This has led Lin, Smith and Fawkes (2014) to refer to public health as an 'organised effort' that requires the contribution of many different parties (see also chapters 2 and 7). Policy, legislative frameworks and resources to support public health services delivery are the responsibility of governments. However, services are given by specialists and professionals in different locations, including hospitals, general practice, community health centres, non-government organisations (NGOs), schools, media outlets, industry and so on (Lin et al., 2014).

In Australia, there are a number of key players in public health (see also Chapter 7). These include organisations both within the government and outside (National Public Health Partnership, 1998; Lin et al., 2014). Local and state governments play a major

role in public health, whereas the role of the federal government is limited (Lin et al., 2014). Traditionally, local government has a central role in environmental sanitation, food safety, and regulation of building and public accommodation standards. Its role has expanded to include more public health activities such as municipal public health plans, which embrace a number of public health strategies to maintain and improve the health of people in a local community. Nowadays, local government is involved in many activities that contribute to the health and wellbeing of the public, including home care, Meals on Wheels, child care and transportation (Lin et al., 2014).

The state government is responsible for three key areas in public health: prevention and control of disease; health promotion strategies; and provision of health protection functions (Lin et al., 2014). Each state government has a Chief Health Officer, who gives advice and reassurances to the public when a public health crisis occurs (Lin et al., 2014). The Commonwealth has been responsible mainly for health funding and an encouragement for the adoption of common approaches to health policies and programs by the state and territory governments.

Public health organisations situated outside government comprise a number of key players. These include general practitioners (GPs), other health services, NGOs, professional organisations, schools, journalists and industry (National Public Health Partnership, 1998; Lin et al., 2014). GPs play an important role in the provision of health services in the community. Access to a number of health and social services is provided to the community by GPs. Other health services in public health are provided mainly through secondary or tertiary prevention. National and state bodies such as the Cancer Council and the National Heart Foundation are strongly involved in public health. They contribute in terms of intervention programs and research (for example, sun protection, women's cancer screening and tobacco control) (National Public Health Partnership, 1998; Lin et al., 2014).

Spotlight 1.2 Vulnerable people and health in Australia

Despite the fact that Australian people do well in terms of health and healthcare access, there are certain individuals and groups who do not enjoy the same levels of good health and health care. These individuals and groups have been referred to as 'vulnerable populations' (Australian Institute of Health and Welfare, 2014; Lin et al., 2014). **Vulnerable peoples**, according to Flaskerud and Winslow (1998, p. 69), are 'social groups who have an increased relative risk or susceptibility to adverse health outcomes'. Based on these descriptions, vulnerable people may include children, older people, ethnic minority groups, immigrants, refugees, sex workers, homeless people, gay men and lesbians, and women. People suffering from chronic illness, the mentally ill and the

Vulnerable people social groups who are at relative risk or susceptibility to negative health outcomes.

continued ›

Spotlight 1.2 continued ›

caregivers of the chronically ill are also referred to as vulnerable populations (Liamputtong, 2007, 2013b).

In public health, according to Lin, Smith and Fawkes (2014, p. 3660), 'vulnerable people' means 'individuals or populations being at risk of ill-health or other harms, such as injury'. Often, their socio-cultural status and living situations have made them vulnerable in various ways. It is suggested that vulnerability is a consequence of inequalities in society. The outcomes of social inequalities include ill health and injury. Often, people who are socially disadvantaged are more at risk of ill health and injury. They tend to have the least social capital and economic resources. Thus, they have less ability to protect themselves from illness and injury. In this sense, vulnerability 'can be thought of in terms of an individual's or group's exposure to a range of psycho-social environmental factors that raise the chances of ill-health' (Lin et al., 2014, p. 366).

Questions

1 Which other groups would you refer to as 'vulnerable people'?
2 What are the public health issues that these vulnerable people might experience?
3 How can key public health organisations respond to their vulnerability and public health issues?

Public health: global concerns

There are a number of global public health concerns in the 21st century. Several global major public health concerns are discussed in this section.

HIV/AIDS epidemic

The HIV/AIDS epidemic has entered its fourth decade and continues to pose a major public health problem worldwide. Although earlier it affected people ranging from intravenous injecting drug users and sex workers to heterosexual men, it has now affected a large number of women around the globe (UNAIDS, 2014). Many of these women are also mothers with young infants. According to the United Nations Population Fund (UNAIDS, 2014), in 2014 there were 36.9 million people worldwide living with HIV/AIDS and two million became newly infected with it. Among young women in developing countries in particular, the rates of infection are increasing rapidly. Among 5.6 million people in South Africa who are living with HIV/AIDS, women account for an estimated 58% of all HIV infections (Visser & Sipsma, 2013). In 2014 alone, there were 25.8 million people with HIV/AIDS in sub-Saharan Africa (the region most heavily affected by HIV), and women comprised more than half of this number (UNAIDS, 2014). Overwhelmingly, the HIV/AID pandemic has disproportionately affected women

of reproductive age (UNAIDS, 2014). Children and young people are also affected badly by the HIV/AIDS epidemic (Lowenthal et al., 2014). In 2013 about 5.4 million young people aged 10–24 years were living with HIV/AIDS (UNAIDS, 2013). Women and children tend to suffer from the adverse impact of HIV and AIDS more than men (Liamputtong, 2013a, 2016). It is suggested that the number of individuals living with HIV/AIDS will continue to grow in sub-Saharan Africa (UNAIDS, 2014).

Migration issue

According to recent World Health Organization (2014) estimates, there are about one billion migrants across the world 'whose lives have been shaped by social determinants in their homelands and who face new social, economic, and political conditions in destination countries' (Castaneda et al., 2015, p. 376). Migration is a result of a number of social determinants (for example, poverty, political persecution and occupational and educational opportunities) (Castaneda et al., 2015). Many people flee armed conflict, persecution and natural disaster. Economic migrants are the largest growing portion of the migrating population and, with increases in global economic problems, this is likely to continue, and it can be associated with human rights issues in the receiving country (Schneider, 2014; see also Chapter 17). This can be witnessed clearly in the recent flood of Rohingya refugees who travelled by boats from Myanmar and were denied entry to Thailand, Malaysia and Indonesia, and Syrian refugees who attempted to enter European nations.

Whether voluntary or involuntary, migration affects individuals and communities in many ways. It certainly necessitates a complete change of their daily life and can have great social, economic and health consequences (Quesada et al., 2014; Castaneda et al., 2015). An important migration issue that has ramifications for public health practice is the increase in the number of women who are migrating. Women generally make up half of the migrating population, and in some countries it is 70–80%. Often, migrant women are put in low paid jobs that are unregulated, such as domestic work. They are at high risk of exploitation, violence and abuse, such as human trafficking. These lead to long-term health and social problems for women, including sexually transmitted diseases and increased numbers of unplanned pregnancies. Often too, they are rejected by their own families when they return home (Schneider, 2014).

Overweight and obesity

Overweight and obesity have now formed part of the global disease burden (White et al., 2014). In 2012 there were more than 315 million overweight and obese people in the world (Fleming & Parker, 2012). Overweight and obesity are among the key risk factors for non-communicable diseases, including type 2 diabetes, circulatory disease and musculoskeletal problems (Schneider, 2014). In many developing nations, such as the USA, a high prevalence of obesity is caused by the combination of eating too much and exercising too little (Schneider, 2014). Rural–urban population movements have also contributed to increasing overweight and obesity in many countries (Schneider, 2014).

The obesity pandemic has become a challenge for both developed and developing nations (White et al., 2014). As the prevalence of overweight and obesity has increased so quickly in recent decades, according to Schneider (2014, p. 275), 'the health risks caused by overweight and obesity threaten to reverse many of the improvements in public health that were achieved in the 20th century' (see Chapter 2).

Prevalence rates for overweight and obesity vary in different regions. Central and Eastern Europe, North America and the Middle East have higher prevalence than northern Europe and Asia (Fleming & Parker, 2012). For developing countries with overstretched healthcare systems, this is a major concern. They have to deal with a 'double burden' of an 'unfinished agenda' of widespread undernutrition and infectious diseases, as well as an emerging burden of diseases linked with over-nutrition (White et al., 2014, p. 292). It is estimated that, with the rapid increase in overweight and obesity in developing nations, the number of obese people could double by the year 2025 (Formiguera & Canton, 2004).

Mental health prevalence

In developed nations, according to the World Health Organization, mental illnesses constitute more disability than other illnesses (Schneider, 2014, p. 325). Among adults, the most common mental illnesses are anxiety and mood disorders. One of the most common mental illnesses in the general population is a major depressive disorder. This illness has a range of symptoms such as sadness and loss of pleasure or interest in things that were once enjoyed. A combination of other symptoms, such as changes in sleep pattern and weight, difficulty concentrating and irritability, may also be experienced by affected individuals (Goldmann & Galea, 2014).

Many mental disorders are the results of environmental impacts. For example, post-traumatic stress disorder is caused by critical, stressful events (Schneider, 2014). This is particularly so for people who experience disasters such as bushfires and earthquakes, and military work. There is a clear link between mental disorders and chronic diseases (for example, asthma, diabetes, epilepsy, cardiovascular disease and cancer). Additionally, people with mental illnesses are at increased risk of injuries (both intentional and unintentional). They tend to use tobacco products and to abuse alcohol and other drugs more than individuals without mental illness (Goldmann & Galea, 2014; Sawyer & Savy, 2014; Schneider, 2014).

It is estimated that, like people in most Western countries, about half of Australian adults will develop at least one mental illness during their lifetime (Australian Institute of Health and Welfare, 2014). The anxiety and depressive disorders that currently affect Australia and other Western nations are mainly due to the commonplace circumstances and stressors that occur in modern societies, such as financial strain, unemployment, economic hardship, overwork, pressure to achieve, relationship breakdown and drought (Sawyer & Savy, 2014; Schneider, 2014). These stresses are intrinsically connected with salient social and environmental factors such as an increase sense of 'individualism', lack of social support, and anxieties about environmental threats