9.7

Public mental health

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Melvyn Freeman, and Michelle Funk

Abstract

Mental health is an integral part of health. Consequently, public mental health is critical to achieving better health in populations. The prevalence of mental disorder is substantial with around 450 million people worldwide suffering from neuropsychiatric conditions. Suicide is among the leading causes of death in 15-45-year-olds. Moreover, mental disorder makes a considerable independent contribution to the burden of disease worldwide—accounting for 13 per cent of the global burden of disease. By 2030, it is estimated that unipolar depression will be the second-highest cause of disability-adjusted life years (DALYs) lost. Globally, the majority of people who need mental health care do not receive it. This 'service gap' is far highest in middle- and low-income countries. There are, however, cost-effective treatments available, and it has been estimated that the benefits of a basic specified package of treatment could lead to a reduction of 2000-3000 DALYs per million population. Inadequate and inappropriate mental health systems and services are a major cause of poor mental health outcomes. Decentralization of services and integration of mental health into general health care are critical to improve mental health status in populations. In middle- and low-income countries, additional trained personnel and facilities are required, especially in general health care. Though there are multiple determinants of mental disorder, social and economic factors are fundamental. Poverty, gender discrimination and violence/war are amongst the most important of these. Understanding social determinants is important for planning services; to initiate prevention and promotion; for advocacy and for the information of sectors outside of health that need to assist in improving mental health—such as social development, labour, education, and housing. Finding appropriate and adequate promotive and preventive interventions in mental health is increasing but remains an important area of growth. Given the inextricable connections between mental and physical health, and the importance of mental disorder as a health problem in its own right, this chapter shows that public mental health is central to improved global health.

Introduction

More than 60 years after health was defined in the preamble of the Constitution of the World Health Organization (WHO) as 'a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity' (WHO 1946), there is still considerable consensus regarding the merit of this definition. Notwithstanding, most countries have not effectively translated this broad conceptualization into health policies and practice. Of particular relevance for this chapter, the 'mental' in the definition has been neglected in public health. This, we maintain, has impeded the realization of better health (both mental and physical) in populations. Nevertheless, public mental health is a rapidly growing discipline and we envisage that it will make a far more substantial contribution to the health status of populations in the future.

There are many reasons for past and current neglect of mental health in health (Saraceno et al. 2007). Critical contributory factors include historical deficiencies in information about prevalence, impact, and effective interventions for prevention and treatment and the stigma and discrimination associated with 'abnormalities of the mind.' However, increasing evidence from the study of the epidemiology and burden of mental disorder; mounting knowledge of the relationships between mental and physical health; better understanding of and information on the determinants of mental ill health; increased evidence with regard to prevention and promotion; comprehensive evidence of effective (including cost-effective) interventions for mental disorder and a growing consensus regarding more humane and more efficient ways of organizing mental health systems and services are all contributing to the growing realization that public mental health is vital to improving the health of populations. Though certainly considerably more effort is still needed to 'unblock' various obstacles to the full recognition of mental health as a key public health issue (such as stigma of mental disorder and political commitment to service development in mental health), the reality that mental health interventions are central to health is gaining momentum.

What is mental health, mental disorder, and public mental health?

Developing a consensus around a definition for mental health has proved far more elusive than that attained for health. According to WHO, from a cross-cultural perspective mental health is nearly impossible to define (WHO 2001). Different groups of people value and aspire to different states of well-being and hence mental health is necessarily a matter of ideology. For example, a person who independently achieves great wealth through striving to be better than
and behavioural interventions (see the section 'Treatment efficacy'). The tools of public mental health are no different from other areas of public health; epidemiology, health promotion and prevention, health systems and services development, health economics and monitoring and evaluation—all play important roles.

**Mental health as a public health priority**

Different criteria have been used at different times and by different experts in order to decide what health problem is, or should be, regarded as a public health priority. We will show that there is compelling evidence using various criteria and perspectives for prioritizing mental health. These include epidemiological data on mental health, co-morbidity with physical health, treatment efficacy, gaps in current treatment, impacts on individuals and their families, and the ideology of health.

**Prevalence of mental disorder**

WHO estimates that about 450 million people worldwide suffer from neuropsychiatric conditions (WHO 2001). Mental and behavioural disorders are found in all countries, in women and men at all stages of life, amongst the rich and poor, and amongst rural and urban people.

Surveys to determine the prevalence of mental disorder have been carried out since the end of the World War II; however, the use of a range of different diagnostic instruments and methods have made it difficult to make cross-national comparisons or even assess longitudinal changes within countries. Moreover, different studies have measured 'point prevalence' (people who have a condition at a point in time), 'period prevalence' (presence of disorder in a particular time period such as one year), or 'lifetime prevalence' (having suffered from a disorder at some point in their lives) and, unless it is made very clear in the study what is being measured, and this has not always been the case, comparisons are difficult.

Analysis by WHO in 2000 indicated a 10 per cent point prevalence of neuropsychiatric conditions in adults (WHO 2001) and that around 25 per cent of individuals will develop one or more mental or behavioural disorders in their lifetime.

Most studies have found the overall prevalence of mental disorder to be almost the same for men and women. However, almost all studies show a higher prevalence of depression amongst women than men with a ratio of between 1.5:1 and 2:1 as well as higher rates of most anxiety and eating disorders. On the other hand, men have higher rates of attention deficit hyperactivity disorder, autism, and substance abuse disorders (Hyman et al. 2006).

In the 1990s, the World Health Organization Composite International Diagnostic Interview (WHO CIDI) was used to determine both prevalence of mental disorder in countries and to assess cross-country differences. While prevalence varied widely, in most countries, more than one third of respondents were found to have had a mental disorder in their lifetime. In 1998, WHO established the World Mental Health (WMH) Survey Consortium to refine the CIDI and conduct mental health surveys around the world. The instrument was modified to measure not only prevalence but also severity, impairment and treatment (WHO 2004). Twenty-eight countries including both high- and lower-income countries in each region of the world participated in the survey. More than 200,000 interviews were conducted. Results of the first 14 countries that had completed the survey were reported in 2004 (WHO World Mental Health Survey...
Table 9.7.1 Twelve-month prevalence of WMH CIDI disorders and proportion with mild severity

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage prevalence of any mental disorder (95% CI)</th>
<th>Of mild severity (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China (Beijing)</td>
<td>9.1 (6.4–12.1)</td>
<td>5.3 (3.2–7.8)</td>
</tr>
<tr>
<td>China (Shanghai)</td>
<td>4.3 (2.7–5.9)</td>
<td>1.8 (0.6–3.3)</td>
</tr>
<tr>
<td>Belgium</td>
<td>12 (9.6–14.4)</td>
<td>5.4 (3.7–7.3)</td>
</tr>
<tr>
<td>Colombia</td>
<td>17.8 (16.1–19.5)</td>
<td>5.9 (5.1–6.8)</td>
</tr>
<tr>
<td>France</td>
<td>18.4 (15.9–21.5)</td>
<td>9.7 (7.3–12.1)</td>
</tr>
<tr>
<td>Germany</td>
<td>9.1 (7.3–10.8)</td>
<td>4.5 (3.2–5.9)</td>
</tr>
<tr>
<td>Italy</td>
<td>8.2 (6.7–9.7)</td>
<td>4.5 (3.2–5.9)</td>
</tr>
<tr>
<td>Japan</td>
<td>8.8 (6.4–11.2)</td>
<td>3.2 (1.7–4.7)</td>
</tr>
<tr>
<td>Lebanon</td>
<td>16.9 (13.6–20.2)</td>
<td>6.1 (3.6–8.7)</td>
</tr>
<tr>
<td>Mexico</td>
<td>12.2 (10.5–13.8)</td>
<td>4.9 (4.0–5.8)</td>
</tr>
<tr>
<td>Netherlands</td>
<td>14.9 (12.2–17.6)</td>
<td>8.8 (6.1–11.3)</td>
</tr>
<tr>
<td>Nigeria</td>
<td>4.7 (2.2–6.2)</td>
<td>3.8 (2.1–4.4)</td>
</tr>
<tr>
<td>Spain</td>
<td>9.2 (6.9–11.4)</td>
<td>9.9 (7.6–12.2)</td>
</tr>
<tr>
<td>Ukraine</td>
<td>10.5 (7.7–13.2)</td>
<td>8.2 (5.6–10.5)</td>
</tr>
<tr>
<td>United States</td>
<td>26.4 (24.7–28)</td>
<td>9.2 (7.1–10.4)</td>
</tr>
</tbody>
</table>

Source: Adapted from World Mental Health Survey Consortium (2004).

Table 9.7.2 Mean (95% confidence interval) estimates of the population prevalence (%) of schizophrenia

<table>
<thead>
<tr>
<th>Point prevalence</th>
<th>0.46 (0.19–1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-month prevalence</td>
<td>0.35 (0.13–0.82)</td>
</tr>
<tr>
<td>Lifetime prevalence</td>
<td>0.3 (0.16–0.52)</td>
</tr>
<tr>
<td>Lifetime morbidity</td>
<td>0.72 (0.31–2.7)</td>
</tr>
</tbody>
</table>

Source: Adapted from Saha et al. (2005). A systematic review of 188 studies conducted in 46 countries was conducted. All studies that reported primary data on the prevalence of schizophrenia between 1965 and 2002 were included.

No significant differences were found between males and females and between urban, rural, and mixed sites. In terms of economic status, the prevalence estimates from lower-income countries were significantly lower than both 'emerging' and high-income sites.

Not many prevalence studies have been conducted on psychotic disorders other than schizophrenia, thought the lifetime prevalence of bipolar disorder, like schizophrenia is often assumed to be about 1 per cent (Peralá et al. 2007). A recent comprehensive study of psychotic and bipolar disorders in Finland found a lifetime prevalence of psychotic disorders of 3.06 per cent. Lifetime prevalence of schizophrenia was 0.87 per cent, schizoaffective disorder 0.32 per cent, schizoaffective disorder 0.07 per cent, delusional disorder 0.18 per cent, bipolar I disorder 0.24 per cent, major depressive disorder with psychotic features 0.35 per cent, substance-induced psychotic disorder 0.42 per cent, and 0.21 per cent for psychotic disorders due to a medical condition (Peralá et al. 2007).

Mortality

Causes of mortality are sometimes used to determine priority levels of different disorders. While mental disorders in themselves have relatively low mortality rates, mental disorders, particularly depression and substance abuse, are associated with more than 90 per cent of all cases of suicide (Bertolote et al. 2004) and the incidence of suicide is substantial. WHO has reported that in 2000 around 1 million people died from suicide. The ‘global’ mortality rate was 16 per 1000—or a death through suicide every 40 seconds. Global suicidal rates for 2006 are shown in Fig. 9.7.1. Nearly 20 times this number attempt suicide. Moreover, official suicide rates are usually substantially underestimated. In an Indian study using surveillance with validated verbal autopsy, the observed rates exceeded official national estimates sixfold (Aaron et al. 2004).

According to WHO, suicide is among the three leading causes of death among 15–45-year-olds (men and women). The numbers of suicides has increased by 60 per cent over a 45-year period. In 2002, it was estimated that self-inflicted injuries were the fourteenth highest cause of all deaths. Projections to 2030 suggest that this will rise to twelfth place in the causes of death (Mathers & Loncar 2006).

Raised non-suicide-related mortality has also been found in, for example, people living with schizophrenia, bipolar disorder, and dementia (Hella et al. 2005; Östby et al. 2001; Dewey & Saz 2001). A major investigation by the Disability Rights Commission (England and Wales) found that people with learning disabilities and mental health problems do not live as long as other citizens. Individuals with serious mental health problems were more likely to get strokes and coronary heart disease before 55 years of age and to survive for...
less than 5 years thereafter (Disability Rights Commission 2006). Reasons for this include the fact that people with serious mental disorder often live in social deprivation (see the subsection "Social determinants of mental health"), but also that the health services discriminate against people with mental health problems. They are less likely to receive medical checks and to be provided with evidence-based treatment.

Burden of disease

While morbidity and mortality are important measures for making health decisions, they fail to take into account important variables necessary for health planning. In response, a joint initiative of the WHO, the World Bank and Harvard University designed and conducted the Global Burden of Disease study. The GBDB approach uses a summary measure—DALY—to quantify the burden of disease. DALYs combine the years of life lost due to premature mortality (YLL) in the population and the years lost due to disability (YLD) for incident cases of the health condition.

The prominence of mental and neurological disorders from the GBD study relative to other disorders was a major revelation to many people and countries. When the DALY figures were first published in 1993, most countries found a major mismatch between the burden of mental health (10.5 per cent of all DALYs lost) and the prominence and attention given it. This was because traditionally only incidence/prevalence and mortality were measured in most international and national statistics. While these indices were well suited to acute diseases that either resulted in death or full recovery, mental and behavioural disorders, which more often cause disability, did not feature prominently. With the loss of 'healthy life' being elevated, mental and neurological disorders were catapulted into the limelight. Moreover projections showed that the burden due to mental disorders was likely to substantially increase relative to other health conditions. In 2002, mental and substance use disorders accounted for 13 per cent of the GBD (WHO 2004). When taking only the disability component of the burden of disease into account, mental and neurological conditions accounted for 30.8 per cent of all years lived with disability.

In 2006, Mathers and Loncar published an update of earlier DALY figures and projections on the burden of disease (Mathers & Loncar 2006). Estimates are now available up to 2030. Importantly for public mental health, as predicted, the relative burden of mental disorder is rising and is set to rise even further. By far the highest mental health cause of DALYs lost is unipolar depressive disorder and this disorder alone is likely to be the second-highest cause of all DALYs lost by 2030—second only to HIV/AIDS. In high-income countries, depression will become the single-highest cause of DALYs lost.

In Table 9.7.A the three leading causes of DALYs lost, projected to 2030, by income group, are presented. Crucially unipolar depressive disorder is amongst the top three causes of DALYs lost in high-, middle-, and low-income countries.

Interrelationship between physical and mental health

Over the past 20 years, a fundamental and inseparable interconnection between mental and physical health has been established (WHO 2001). While thoughts, feelings, and behaviour have a major impact on physical health, physical health strongly influences mental health and well-being. There are two key pathways through which the physical and mental interact—firstly through physiological systems such
as neuroendocrine and immune functioning, and secondly through health behaviour (WHO 2001). However, these pathways are not independent in that behaviour may affect physiology, while physiological functioning may in turn affect health behaviour.

There are numerous examples of how mental health status may impact on physical health and vice versa. At least one-third of all somatic symptoms remain medically unexplained. Common symptoms include pain, fatigue, and dizziness, while defined syndromes include irritable bowel syndrome, fibromyalgia, chronic fatigue syndrome, chronic pelvic pain, and temeraro-mandibular joint dysfunction (Prince et al. 2007). Somatization is present in around 15 per cent of patients seen in primary care and is independently associated with poor health-related quality of life and increased healthcare utilization (Barsky et al. 2005).

A review by Prince et al. has shown strong evidence from population-based research for moderate to strong prospective associations between depression and anxiety and coronary heart disease outcomes including angina and non-fatal and fatal myocardial infarction. They also showed strong evidence that depression is an independent risk factor for stroke. Depression is increased after myocardial infarction, mostly in the first month after the event. There is also strong evidence for co-morbidity between mental disorder and diabetes. The prevalence of diabetes among people with schizophrenia has consistently been found to be in the order of 15 per cent compared to a typical community prevalence of 2-3 per cent (Holt et al. 2005).

The interrelationships between physical and mental health are highly complex. Here, we illustrate five important mechanisms of this relationship through the example of mental health and HIV/AIDS.

**Mental health status increases the risk of infection**

In the United States, people with severe mental illness are nearly 20 times more likely to be infected with HIV than the general population (McKinnon & Rosner 2000). Reasons for this include a lack of appreciation of risk, impaired social interactions, low levels of assertiveness, low use of condoms, injecting drug use, multiple partners, sexual activity within closed environments such as institutions, and homelessness. Though this relationship has not been documented in low- and middle-income countries, and though the ratio would inevitably be lower, the reasons for high-risk sexual behaviour and the chances of transmission within psychiatric institutions pertain at least as much to people in low- and middle-income countries as they do to those in high-income countries. High risk of infection is also not limited to severe mental disorder. In South Africa, depression in youth has been significantly correlated with risky sexual behaviour (Moghrraby et al. 2005).

**HIV infection directly affects the central nervous system functioning**

The HIV virus has numerous direct impacts, including on the central nervous system. HIV dementia and minor cognitive disorders are common in people living with HIV/AIDS who are not taking anti-retroviral treatment with between 30 per cent and 50 per cent of HIV-seropositive individuals experiencing cognitive-motor problems (Grant et al. 1999). HIV invades the brain early in the infection process and in a certain proportion of people psychotic symptoms manifest—especially in late-stage AIDS. Manic episodes are above the population norm in people with HIV (around 5 per cent), especially at more advanced stages of the disease (Catalan et al. 2000). It is clear that a disease that attacks the immune system of the body also has direct 'mental' manifestations.

**Psychological impacts**

Studies of the mental health status of people infected with HIV have consistently found higher prevalence of mental health problems than
is found in community or clinic samples. From the research thus far it has not been possible to reliably separate out people who may have had a pre-existing mental disorder from those that may have developed mental disorder following a positive HIV diagnosis. Moreover the extent to which mood and anxiety disorder may be caused directly by the viral infection itself is not clear. However, we know from qualitative research that receiving a diagnosis of HIV and living with the disease can be highly psychologically disturbing.

High levels of depression, mild depressive disorder, and dysthymia have all been found in seropositive individuals. Bing and his co-researchers found a 36 per cent one-year prevalence of depression among a large national sample of HIV-positive men and women in the United States (Bing et al. 2001). This is substantially higher than found in the general population. Ciesla and colleagues conducted a meta-analysis of studies comparing HIV-positive and HIV-negative samples and found that major depressive disorder occurred nearly twice as often among people living with HIV (Ciesla & Roberts 2001). In a review of studies of mental health problems of HIV infected people in developing countries, Collins et al. also found a significantly higher prevalence of depressive symptoms among HIV-positive people compared with controls (Collins et al. 2006).

Feelings of anxiety and distress are a normal and arguably even a healthy response to a diagnosis of HIV. However anxiety may reach clinical levels and impair overall functioning and people’s capacity for adequate self care. The prevalence of anxiety disorders in studies in the United States range from negligible to around 40 per cent. Anxiety can be provoked by the unpredictability of the virus and by certain ‘milestones’ such as initial diagnosis, first opportunistic infection, declining CD4 count or the onset or progression of an AIDS defining illness.

Influencing the course of the disease
To maintain good health a person living with HIV/AIDS (PLHA) must engage in a number of ‘health promoting’ behaviours and maintain a ‘positive’ attitude towards themselves and towards the virus. For example, a PLHA must engage in protected sex to avoid reinfection, they should eat nutritious food, refrain from excessive use of alcohol, not smoke cigarettes, immediately seek treatment for opportunistic infections when needed, and, if they are on antiretroviral treatment (ART), they must adhere to their medication regimen.

A review by Uddall et al. (2004) found a number of studies that showed that poor mental health was a barrier to ART adherence. This association was particularly significant in women. At least eight studies have shown that adherence to antiretroviral medication is adversely affected by mood disturbance. In addition, research indicates associations between poor adherence and generalized anxiety disorder, panic disorder, post-traumatic stress disorder (PTSD), recent trauma, and social phobia.

Side effects of medication
Another way that the physical and the mental interaction is when medication is given to treat a physical problem and there are mental side effects. (Of course, the opposite is often also true whereby medication given to treat a mental condition has physical side effects such as tardive dyskinesia.) In a minority of patients receiving anti-retroviral therapy, mania and psychosis can occur due to the medication they receive such as AZT, 3TC, efavirenz, abacavir, and nevirapine. Patients who have had multiple episodes of depression are at particular risk of having negative reactions to efavirenz.

Treatment efficacy
Having effective (including cost-effective) treatments available is another crucial component of whether a health condition should be prioritized. Most mental disorders can be effectively treated and at a cost that justifies intervention. Whiteford suggests that the burden of illness on the individual and society combined with treatment efficacy could be used as the basis of decisions to allocate resources (Whiteford 2000). Interventions that demonstrate the greatest health gain for the lowest cost would be the most highly prized. Mental health interventions fall into this category.

A recent analysis by the WHO of the comparative effectiveness and costs of pharmacological and psychosocial interventions for reducing the burden of mental disorders found the following (WHO 2006a):

Pharmacological interventions
Both conventional neuroleptic and newer ‘atypical’ antipsychotic drugs are effective in treating psychosis. Both types of medication have similar efficacy though the former are less expensive. It is therefore recommended that in countries with limited resources (and until such time as newer drugs come off their patent) conventional neuroleptic drugs should be provided.

Both older tricyclic antidepressants (TCAs) and selective serotonin reuptake inhibitors (SSRIs) are effective in treating depression. Costs and effectiveness of medication vary in different contexts, and therefore the drug treatment of choice should be driven by patient or clinical preferences and local costs.

Psychosocial interventions
Psychosocial treatment, alongside pharmacological treatment for severe disorders such as schizophrenia and bipolar affective disorder, is expected to result in substantial health gains. A combined strategy is more cost-effective than pharmacotherapy on its own.

Psychotherapy is expected to be as cost-effective as most medication for people with depression or anxiety disorders.

Case management
It is expected that long-term maintenance treatment of depression with pharmacological and psychosocial interventions is a more cost-effective strategy than episodic treatments as it prevents a proportion of recurrent depressive episodes.

The mental health service gap
Another reason to prioritize a condition is if the gap between the existence of a condition and the numbers of people being treated for it (especially if effective treatments are available), or programmes to prevent it, is high. Kohn and colleagues reviewed community-based psychiatric epidemiology studies and calculated the median rates of untreated cases of various mental disorders (Kohn et al. 2004). The median treatment gaps are found in Table 9.7.5.

These figures are major underestimates of the gaps globally as most of the data available are from high-income countries that have far greater availability of services. For example, in the only condition where a figure was available for Africa, there was a 67 per cent treatment gap for major depression compared with a 45.4 per cent gap for Europe. In the World Mental Health Survey, 35.5–50.3 per cent of serious cases of mental disorder in high-income countries and 76.3–85.4 per cent in middle- and low-income countries received no treatment in the 12 months before the interview (WHO World Mental Health Survey Consortium 2004).
Table 9.7.5 Treatment gaps for mental disorder—world

<table>
<thead>
<tr>
<th>Mental disorder</th>
<th>Median treatment gap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia and other non-affective psychotic disorders</td>
<td>32.2%</td>
</tr>
<tr>
<td>Depression</td>
<td>56.3%</td>
</tr>
<tr>
<td>Dysthymia</td>
<td>56.6%</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>50.2%</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>55.9%</td>
</tr>
<tr>
<td>Generalized anxiety disorder</td>
<td>57.5%</td>
</tr>
<tr>
<td>Obsessive compulsive disorder</td>
<td>53.3%</td>
</tr>
<tr>
<td>Alcohol abuse and dependence</td>
<td>78.1%</td>
</tr>
</tbody>
</table>

Source: Adapted from Kohn et al. (2004)

Treatment gap represents the absolute difference between the true prevalence of a disorder and the proportion of individuals over 15 years affected by the disorder.

Clearly, the majority of people needing mental health interventions are not receiving it. Some of the reasons for the gap include a lack of identification of mental health problems by health workers; sufferers themselves not seeking treatment due to stigma, fear, or lack of knowledge that they have a treatable condition; lack of or unavailability of resources; seeking assistance elsewhere due to cultural beliefs, affordability; and poor health systems that do not allow or encourage treatment in the community. For many people, the only time they might receive treatment is if they become so disruptive in their families or communities that they are placed involuntarily.

Personal and family impacts

The GBD study estimated that, in 2000, mental and neurological disorders accounted for 30.8 per cent of all years lived with disability—with depression accounting for 12 per cent of all disability (WHO 2004). This though does not capture the economic and psychological stress to individuals and their families resulting from this disability.

Days out of role is an important measure of the macroeconomic impacts of mental disorder (WHO 2006a); however, for individuals and families, this very often means a direct and personal loss of income (especially where there are no or poor unemployment benefits). Moreover, a family member, often a woman spouse or parent, has to take time off from income-generating activities to care for the person with mental disorder. Income into the family is hence further eroded. Furthermore, due to the person’s mental disorder there are additional health care and usually transport costs (to get to a treatment centre) that need to be paid for (Patel & Kleinman 2003). As mental disorder is often chronic, these costs may be ongoing. In addition, in many countries, insurance payouts for mental disorder are limited (even discriminatory relative to other health problems). Thus, health care may become even less accessible and less available with time—and so the condition deteriorates and the need for care increases. The result of this cycle is often a ‘shift’ into poverty, with little chance for a person to move back to their pre-mental disorder life situation.

Being ill with any condition can be psychologically debilitating. This is exacerbated if one is forced out of work by one’s condition and one has to become dependent on others. But when this condition is also quite frightening to oneself and one sometimes feels out of control, when the condition is shrouded in stigma, where blame is often put on the ill person themselves and where appropriate treatment is not readily available (WHO 2001), the condition can become psychologically devastating to the individual concerned.

For families too, having a person develop and live with mental disorder, can be frightening, extremely disruptive, and a major economic burden. Especially where information and support are not available, family members may be inclined to just want to get rid of the person or to restrain or sedate them. Families too often become the object of discrimination. It has been found that carers who provide someone with substantial support are twice as likely to have mental health problems as those they are caring for (Singleton et al. 2007).

In many countries, access to and knowledge of treatment is so poor that it is only when the ill person becomes so disruptive in their family and community and they can no longer be dealt with, that help is sought. At this point, the patient is often unwilling or unable to cooperate and so involuntary care and treatment is required. Poor service accessibility hence results in higher proportions of people receiving care without their consent than would otherwise be the case.

Ideology of health

There is no health without mental health. This seemingly simple assertion, which flows directly from the WHO definition of health, contains a number of important inter-related meanings and has major practical implications for health and health services. Firstly, any reference to health or ill-health or any health condition invariably includes a mental health component. Hence, where a person has developed or contracted a ‘physical’ disease (communicable or non-communicable), or has even been physically injured, there is usually also a mental aspect that needs consideration. This is important—whether mental health may have been a risk factor of the presenting problem (for example, depression underlying risky sex behaviour resulting in HIV/AIDS or an alcohol problem resulting in a car accident), or is a secondary outcome. Mental health should thus be integral to all health assessments and treatment. Secondly, the assertion implies that a state of optimal health also implies a state of optimal mental health. Initiatives directed at attaining good population health should thus include considerations of mental health. Thirdly, if a state of health includes both physical and mental health, then clearly there can be no ‘health’ if mental disorder is present. Attending to mental health problems should therefore have parity with regard to treatment and prevention of physical conditions. Finally, following from the above points, health policy, health systems, and health service development should always include a mental health component. Hence, there should not only be no health without mental health, but no health service that does not provide mental health. Brundtland, a previous Director-General of the WHO, commented that ‘talking about health without mental health is a little like tuning an instrument and leaving a few discordant notes’ (WHO 2001).

The highly complex nature of human beings involves interacting biological, social, and mental components, and to accurately understand and improve human health, all three elements, and the interactions between them, need focus (WHO 2001). Critically, human beings are not mechanical automations that ‘break down’ from time to time, but are dynamic and active beings that substantially shape their own state of health and illness. For example, a person’s eating habits, the amount of exercise they do, whether they avoid dangerous situations such as drinking and driving or having unsafe sex, and
whether they take the medication that is prescribed and in the manner instructed, and whether they seek health care at an early stage of an illness are all fundamental to healthy human states and rely irrevocably on human agency—though decisions are often not taken at a conscious level and are often made without adequate information. People may also be limited in what they can do by their socioeconomic conditions.

Clearly then, mental factors, including personal volition and individual behaviour, are as important to states of health as are biological and social factors. Importantly though, mental states do not have an independent existence from the biological and the social and are in themselves shaped in interaction with these elements. Similarly, the mental states shape the biological and the social components. Hence, while it is useful to theoretically separate out the 'contributors' to health, this is an analytic exercise rather than an empirical one. The interacting process between the components begins at birth and stops only at death. Yet, despite this 'empowering' people to make 'healthy' decisions is seldom seen as an important health intervention (Peterson & Swartz 2002).

In addition to the impacts on health through behaviour, as previously seen, physical and mental states of well-being mutually affect each other (see the section 'Interrelationship between physical and mental health').

Mental disorders, like other health problems, also have physical, psychological, and social components. Hence, in treating and preventing mental disorder, all three components must also be considered. The mental aspect of health probably captures which is 'most human' in health and without which much of human health care may be likened to veterinary medicine. Considering human health without mental health then is fundamentally flawed, and health policy, systems, and services that neglect the 'mental' side will inevitably be less effectual in improving the health status of populations than those that include mental health.

### Cost effectiveness of treatment for mental disorders

The economic costs associated with mental disorder are considerable. Conservative estimates across the 15 countries of the European Union found mental health costs to be at least 3-4 per cent of gross national product. The majority of costs occur outside the health sector, being due to lost employment, absenteeism, poor performance, and premature retirement (McDaid 2005). These costs account for between 60 per cent and 80 per cent of the total economic impact. Millions of working days are lost because of mental health. In France, in 2000, nearly 32 million working days were lost due to depression alone. Though estimates are not available from lower-income countries it is likely that the costs of mental disorders as a proportion of the overall economy are also high (WHO 2001).

Given the high estimates of the burden of mental disorders and cost-effective treatments available (see the subsection 'Treatment efficacy'), Hyman et al. calculated the burden that could be averted by efficacious treatment for schizophrenia, bipolar disorder, depression, and panic disorder. A model was developed that included giving no treatment at all, current treatment, and scaled-up treatment. The model derived the number of additional healthy years gained (equivalent with DALYs averted) each year compared with the outcome of no treatment at all (Hyman et al. 2006). In Table 9.7.6, the estimated costs and effects of a package consisting of a basic mental health services for the four conditions is outlined. The authors estimated that the benefit of this package would be an annual reduction of 2000–3000 DALYs per million population at a cost of USD3 million to USD9 million (that is USD3–4 per capita in sub-Saharan Africa and South Asia, and USD7–9 per capita in Latin America and the Caribbean). This means that for every USD1 million invested in such a mental health package, 350–700 healthy years of life would be gained over no intervention.

However, even if healthy life years could be gained, how affordable would such mental health interventions be? When set against the gross domestic product per capita, the WHO have found that:

- The interventions recommended in the package for depression and anxiety can be considered very cost-effective. Each healthy year gained costs less than one year of average per capita income.
- Older anti-psychotic and mood-stabilizing drugs as part of community-based interventions can be considered moderately cost-effective for severe mental disorders. Each healthy year gained costs less than three times average income.
- Atypical anti-psychotic drugs at current international prices, especially if delivered in hospital based settings, are not cost-effective in the context of most low- and middle-income countries as each healthy year gained costs significantly more than three times average annual income.

While mental health interventions do not compare favourably in terms of the above affordability criteria with health actions such as vaccinations or tuberculosis control, the WHO estimates that there is just as much economic justification for mental health care as there is for anti-retroviral therapy for AIDS, glycemic control of diabetes, and cholesterol control with statins (WHO 2006b).

### Mental health systems and services

Two critical reasons for poor mental health status of populations is that people do not receive care when they need it (care is not available or accessible) and when treatment is provided it is not given effectively or efficiently. These problems can primarily be attributed to inadequate and inappropriate health systems and services for the delivery of mental health, though personal and social reasons (such as stigma) also inhibit good care.

### Brief historical overview of mental health services

Different cultures have viewed mental illness from vastly different perspectives, and hence there has not been one history of mental health care but many highly diverse examples. Still today, the provision of mental health services is often based on misunderstandings about the causes, consequences, and treatment of people with mental disorders. According to Tyer et al., some of the earliest reports of 'madness' date back to the Anglo-Saxon period where it was generally thought that people exhibiting symptoms of mental disorder were possessed by the devil (Tyer & Steinberg 1998). Accordingly, the treatment, when available, centred around the practice of exorcism. Those that were not afforded this 'luxury of leniency' were either left to wander aimlessly in a neglected state or were punished by being chained up, beaten, or ultimately burned at stake. In medieval times, in the United Kingdom, there was a shift towards acknowledging that the mad were in fact ill and were treated together with other people who were ill.
In traditional Chinese medicine, mental disorders were considered, in the same way as physical disorders, to be due to imbalances in the internal organs. The treatment of mental illness was aimed at restoring physiological function and balance (Chang et al. 2002). Specialized treatment for the mentally ill was introduced to China by foreign missionaries in the late 1800s, with the establishment of the first asylums. According to Chang et al. in the 1950s, the health of the people of China became symbolically intertwined with the health of the new regim with psychiatric treatment linked with achieving the goals of the 'collective good' and assisting the patient to fulfill his or her prescribed role in society. Unique models have since developed taking into account the cultural, social, political and resource factors in the country. For example the 'Shanghai model' involves inter alia community mental health networks that provide follow-up and rehabilitation in the community. Rehabilitation is implemented through guardianship networks consisting of trained volunteers who supervise individual patients, maintain treatment schedules and provide family support (Chang et al. 2002).

Meanings given to behaviour and the resultant intervention is also well illustrated through examination of 'bizarre' behavioural symptoms in isiZulu-speaking communities in South Africa. The syndromes of 'amaSfumane' and 'ukuthwasa' are relatively common, and the 'symptoms' of both overlap with ICD 10 and DSM IVTR schizophrenia and other psychotic disorders (Niehaus et al. 2004). However, these conditions are understood very differently from allopathic interpretations of mental disorder, and indeed from each other. Ukuthwasa is understood as a form of ancestor possession that signifies a calling to become a healer. By removing herself (it is usually a women) to live with a healer/teacher and become a healer herself, the Thwasa sufferer is able to overcome the symptoms. On the other hand, amaSfumane is caused by spirit possession. Rituals to appease the ancestors usually need to
be performed to rid the person of the cause of the usually uncontrollable behaviour exhibited.

The first documented moves to treat people with mental illness in segregated facilities in the United Kingdom was at the turn of the fifteenth century, when the first hospital for the treatment of people with mental illness was set up—Bethlem Hospital. In Europe, during the eighteenth and nineteenth centuries, people with mental illness were moved to large asylums that were built for this purpose. This trend was later exported to Africa, the Americas, and Asia (WHO 2001). The initial aims of these asylums were therapeutic but soon turned into impersonal institutions (Tyrer & Steinberg 1998). At the peak of institutional care in the mid-twentieth century, hundreds of thousands of people were kept in institutions. In the United Kingdom and the United States alone, there were 155,000 and 559,000 people in asylums, respectively (Hafer & an der Heiden 1989).

In the mid-twentieth century, there was a major ideological and organizational shift away from large institutions towards more community-based care and treatment. Many reasons have been given for this change including the introduction of neuroleptics in the mid-1950s; fiscal considerations (institutional care was seen as expensive); sociological criticisms and an increase in human rights advocacy and the anti-psychiatry movement (Tyrer & Steinberg 1998; Prior 1991; Drew & Funk 2006). It is likely that all of these factors played some role. In any event, in countries that had very high asylum bed to population ratios, significant decreases of bed numbers occurred.

Probably the most radical example of the move away from large mental asylums occurred in Italy. In 1978, ‘Psichiatria Democratica’ under the leadership of Franco Basaglia came to fruition through Law 180. The law stated that no patient could be admitted to existing psychiatric asylums and demanded that all chronic patients be gradually discharged from hospital. All existing psychiatric hospitals were to be unlocked and the civil liberties of patients returned to them. Provision was made for 15 beds (maximum) in general hospitals. Importantly, the pressures that brought the changes came predominantly from community groups. The fact that this reform was a social movement towards integrating and accepting the mentally ill into the community distinguishes this experience from any other deinstitutionalization and remains a central ingredient of the Italian success (Sheper-Hughes & Lovell 1986).

All the above examples illustrate how the social and political environment and the cultural meanings ascribed to mental disorder have shaped and continue to shape the treatment and care approach.

### Current mental health services

Formal mental health services in many parts of the world, especially in poorer countries, are characterized by poor accessibility, inadequate resources, and far from optimal organization of services. Most people with mental disorders do not have medical care for their conditions (Funk et al. 2005). Many people rely on traditional remedies and traditional healers for their mental health care.

Availability of mental health professionals is a major inhibitor to treatment. Table 9.7.7 shows the median number of psychiatrists, psychiatric nurses, and psychologists working in mental health per 10,000 population per region (WHO 2005).

<table>
<thead>
<tr>
<th>Region</th>
<th>Psychiatrists</th>
<th>Psychiatric nurses</th>
<th>Psychologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>0.04</td>
<td>0.2</td>
<td>0.05</td>
</tr>
<tr>
<td>Americas</td>
<td>2.6</td>
<td>2.6</td>
<td>2.8</td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td>0.95</td>
<td>1.25</td>
<td>0.6</td>
</tr>
<tr>
<td>Europe</td>
<td>9.8</td>
<td>2.48</td>
<td>3.1</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>0.2</td>
<td>0.1</td>
<td>0.03</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>0.32</td>
<td>0.5</td>
<td>0.03</td>
</tr>
<tr>
<td>World</td>
<td>1.2</td>
<td>2</td>
<td>0.6</td>
</tr>
</tbody>
</table>


Higher-income countries and a concomitant development of community mental health services, there are still far more beds per capita in high-income than in lower-income countries. Hence, though the vast majority of mental health resources in low- and middle-income countries are indeed spent on psychiatric hospitals, these facilities still have far fewer beds per 10,000 population than is available in higher-income countries. Though for low- and middle-income countries, moving resources out of psychiatric hospitals is a necessity as additional resources for much needed mental health care in the community is often not available, reduction of bed numbers is from an already very low base.

### Accessibility of services

There are a number of reasons why access to services may be limited. Here we consider only two issues: Geographical and financial access.

**Geographical accessibility**

Primary care is usually the first access point for people needing health care. Many countries have put considerable effort into providing health care as near to people's homes or places of work as possible through initiatives such as community or village health worker programmes and the expansion of health posts and clinics to underserved areas. Health posts or clinics have extended their hours to make it easier for working people to access and to treat people when they fall ill outside of normal working hours. However, many (if not most) of these primary care initiatives have not included mental health.

### Table 9.7.8 Hospital beds for mental disorder for WHO regions

<table>
<thead>
<tr>
<th>Region</th>
<th>Median hospital beds for mental disorder per 10,000 population</th>
<th>Per cent of beds in mental hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>0.15</td>
<td>73%</td>
</tr>
<tr>
<td>Americas</td>
<td>0.64</td>
<td>80.6%</td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td>1.07</td>
<td>83%</td>
</tr>
<tr>
<td>Europe</td>
<td>8</td>
<td>63.5%</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>0.33</td>
<td>82.7%</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>1.06</td>
<td>60.1%</td>
</tr>
<tr>
<td>World</td>
<td>1.69</td>
<td>68.6%</td>
</tr>
</tbody>
</table>

The principle of 'no health without mental health' has not been applied. Some of the reasons put forward regarding why mental health has not been included are that health workers are not trained or supported to do mental health interventions, staff do not have time for mental health and reluctance and fear amongst health workers to see people with mental health problems due to the 'otherness' of mental health. Similarly, most general hospitals do not admit and treat people with mental health problems. Staff at general hospitals are often reluctant to admit people with mental health problems into the general wards as patients with mental disorder are perceived as being disruptive (and sometimes are) and no dedicated psychiatric wards have been set up.

Poor accessibility at primary care and general hospital levels forces people to either not receive care at all or to try and access care at a centralized psychiatric hospital. However, because of the work pressures that people at the psychiatric institutions are under and because the hospital is usually designated as a 'specialist' level, even if the patient does manage to get to the hospital, they are often turned away as the hospital has many more severe cases that have to be dealt with. The outcome of the limited primary care service is that the less severe problems become more severe. When this occurs, the patient may finally receive care at the psychiatric hospital (but by this time often as an involuntary patient). Then, because of the distance of the hospital from the community, family and other community members may not be able to visit the patient, and the patient may lose contact with them. Moreover, if hospitalization has become necessary because the person became disruptive, the family and community often do not want the individual back when they do recover. In many countries, there are no community facilities for the person to be (down) referred to; hence, the progression that started when the person could not access primary or general hospital care continues with the individual becoming a chronic patient in the institution. The alienation of this experience then psychologically 'institutionalizes' them, and discharge becomes even more difficult. Early and accessible care may have prevented this progression with minimal harm to the person concerned and would have been considerably less expensive to the state!

Financial accessibility

Different countries have different policies on the financing of health care and mental health care in particular. Where mental health services are not free, this has critical consequences for accessibility. It will be shown (see the section 'Understanding the determinants of mental health') that many people who need mental health services are poor, and even if they did not start that way, many drift into poverty. In addition, because many mental health conditions are chronic, health expenses tend to be relatively high. For an individual, ongoing medication and occasional hospitalization may be required.

Moreover, especially where mental health care is not obtainable at a local level (but also then), there may be a number of additional costs for the individual and their family. For example, transport to the facility to get medication and review may be prohibitive. Furthermore, because of their condition, the patient may need to be accompanied to the place they receive care. The accompanying person would then also endure transport costs, they may also have to take leave from their employment to accompany the patient, both the patient and the person accompanying them may need to buy food and so forth. As a result of these expenses, the person may be denied access to mental health care. As in the geographical accessibility scenario, the consequences of not accessing treatment due to no finances is often 'false economy', as the person may land up in expensive and long-term care.

Pyramid of services—an optimal mix for mental health

WHO have put forward a 'pyramid of services' (Fig. 9.7.2) that provides an optimal mix of services required by people with mental disorders (Funk et al. 2004). This model is based on the premise that no single service can meet all mental health needs. In fact, without

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**Fig. 9.7.2** Optimal mix of services. Source: Funk et al. (2004).
any one of these service levels, and referrals up and down the pyramid, the 'system' breaks down, and the other parts are unable to function effectively and efficiently.

At the bottom of the pyramid, and where most care is provided, is self-care. Most people can manage their own mental health problems themselves or with help from family or friends. However to facilitate the autonomy and ability of people to care for themselves, the health service or non-governmental organizations need to provide information to people. This should be available and accessible to all people through, for example radio shows or pamphlets that are distributed in languages and literacy levels that people understand.

Informal community mental health services are services provided in the community but that are not part of the formal health and welfare system. Examples of this are traditional healers, professionals in other sectors such as teachers, police; village health workers, services provided by non-governmental organizations, user and family associations, lay-persons, and so forth (see Box 9.7.1). Services at this level are important in preventing people who can effectively be cared for at this level from making demands further up the pyramid, however it is also an extremely important level for 'down referral'. People who may have been treated in a hospital, for example, and discharged, often need informal support to prevent them from relapsing or needing care at a higher level. Informal services are usually accessible and acceptable to the community as they are an integral part of the community. It can be seen then that most mental disorders are dealt with outside of the medical system.

The first 'formal' mental health service is within primary health care. The integration of mental health care into primary health services is a critical component of comprehensive mental health care. Essential services at this level include early identification of mental disorders, management of stable psychiatric patients, referral to other levels where required, as well as promotional and prevention activities. Depending on who carries out first-level health care in a particular country, activities and interventions may be carried out by general practitioners, nurses, or other staff who provide assessment, treatment, and referral services.

Mental health services at this level greatly increases physical accessibility as first-level general health care is usually relatively close to where people live. In addition, the person can be treated as a whole person who may have co-morbid physical and mental health problems. We have previously emphasized the importance of interacting physical and mental health problems. Seeking and receiving treatments part of a general health care is also often less stigmatizing for an individual, especially where having a mental disorder is regarded as shameful. Services are therefore more acceptable to users than having to be treated in a psychiatric facility. From a clinical perspective, it has been found that most common mental disorders can be treated at primary care level. In situations where there are few trained mental health practitioners, an integrated approach substantially increases the chances of being treated for mental disorders.

Integration of mental health into primary health care requires careful training and supervision of staff. Staff needs to be equipped with knowledge and skills that enable them to provide mental health care through training provided as part of initial health worker training as well as ongoing in-service training (WHO 2003). Additionally, they have to be adequately supervised and supported. Health workers often feel ill-equipped and reluctant to undertake mental health in addition to other health care and so ongoing assistance is essential. Critically too, where psychotropic medication is needed, this must be available at this level. This means that these drugs need to become an integral part of the supply, storage, and distribution chain and provision must be made for the prescription of necessary drugs at this level.

Where there is no integrated first-level care, addition pressures are put on the higher levels of care. People are inappropriately referred to levels of care that should be dealing with more complex problems and where there is no early identification of problems, treatment or prevention, and promotion, more people become seriously ill and need to be treated at the higher levels.

The next level of the pyramid has two complementary components, the first is formal community mental health services and the second is mental health services in general hospitals.

In addition to the informal services that are commonly provided in communities for people with mental disorder, additional formal community services such as day centres, rehabilitation services, hospital diversion programmes, mobile crisis teams, therapeutic and residential supervised services, group homes, home help, assistance to families, and other support services are needed. While not all community mental health services will be able to provide all these services, a combination of some of these, based on needs and requirements, is essential for successful mental health care. Where there are no or highly inadequate community services, it becomes very difficult to discharge patients from psychiatric hospitals, thus 'clogging up' scarce and expensive hospital beds. Others who could avoid hospitalization if community care was available are unnecessarily (though necessary in the circumstances) hospitalized.

Without good community-level care, people often land up either in inhumane institutions or destitute and living on the streets. On the other hand, people receiving good community care have been shown to have better health and mental health outcomes and better quality of life than those treated in institutions (Anderson et al. 1993).

As part of the mental health system represented by the pyramid of care, it is important that the community mental health services have strong links with other services such as the primary care and informal and general hospital services.

The development of mental health services in general hospital settings with functions such as those shown in Box 9.7.2 is another critical element of the organization of services. Given the nature of
Understanding the determinants of mental health

Mental disorders are caused by a combination of biological, psychological and social factors (WHO 2001) and the interactions between them (see the subsection 'Interrelationship between physical and mental health'). Neuroscientists and geneticists have made significant progress regarding biological determinants of mental disorder while psychological research and insight have added substantially to our understanding of mental disorder and human behaviour. For example biochemical and morphological abnormalities of the brain associated with various disorders such as schizophrenia, autism, mood and anxiety disorders are currently being identified through postmortem analysis and noninvasive neuroimaging. Moreover, research identifying risk-conferring genes for mental disorder is underway and it seems that initial results are promising (Hyman et al. 2006). Furthermore, improved understanding of the structure and functioning of the brain has led to major advances in psychotropic medications. From a psychological perspective, comprehensive explanations of human dysfunction and behaviour have been translated into effective therapies that improve mental health status.

While all health is determined by biological, psychological, and social factors, in various respects, the aetiology of mental disorder is even more complex than for many physical disorders. The balance between the three domains is often weighted differently for mental health than physical health with a stronger influence of psychological and social factors. Moreover, cultural differences (including different belief systems regarding the causes of disease and how they can be cured), language and power relations between provider and patient are also often different when a disorder manifests 'mentally' rather than physically. Stigma is another major public health concern that most disorders do not carry to the same extent as mental disorders do. All these impact the course and outcome of mental disorders. In the following section, we look primarily at the social determinants of mental (ill) health, as these are of the most specific concern to public mental health.

Social determinants of mental (ill) health

Research in mental health has tended to focus more on the psychological or the biological determinants of mental ill-health than the social determinants. This has led to an imbalanced focus on the use of biomedical interventions and/or a focus on treating the individual to the neglect of altering aspects of the wider social environment. Part of the reason for this imbalance in focus relates to the real difficulties in altering the social environment (especially the macro-social environment) since, quite often, these are not within the control of public health practitioners. However, redressing this imbalance can make a highly significant contribution to public health or public mental health and in improving social development.

In this section, we examine four critical ways through which an understanding of the social determinants of mental health can improve public mental health.

1. Careful and scientific documentation of social and economic determinants informs mental health service planning.

Planners of mental health services need to know the extent of mental disorders within a country and whether there are differences between groups of people, but they also need to know what the reasons for these differences are. In addition, they need to be aware of particular 'vulnerable' groups so that they can put in appropriate
prevention programmes where possible, identify problems at an early stage and/or allocate resources where they are most needed.

For example, poor and deprived people have a high incidence of mental and behavioural disorders (WHO 2001). Whether this is due to the impacts of poverty on the poor or to a ‘drift’ of the mentally ill into poverty is often debated, but in all likelihood both are true and in fact they are inextricable.

Patel and Kleinman reviewed 11 studies that examined the relationship between poverty and common mental disorders (Patel & Kleinman 2003). They found that the mean prevalence rates of depression and anxiety disorders varied between 20 per cent and 30 per cent with almost all studies showing a significant relationship between prevalence and various indicators of poverty. The association between poverty and common mental disorders was found to occur in all societies regardless of their levels of development, however they found no ‘absolute level’ that could be correlated with mental disorder.

Severe mental disorders such as schizophrenia are also highest in people living in lowest socioeconomic circumstances. Saraceno and Barbui showed that people with the lowest SES have eight times higher relative risk for schizophrenia than those in the highest SES groups (Saraceno & Barbui 1997).

Poverty cannot be said to ‘cause’ mental disorder as most people living in poverty do not have a mental disorder, however it does increase the risk of developing a mental disorder. Poverty and common mental disorders interact with one another in setting up a vicious cycle of poverty and mental illness (Saraceno & Barbui 1997). People are simply more likely to develop mental disorders in conditions of poverty. Moreover: the ability of the person to confront or overcome their poverty condition, including getting treatment, is exacerbated if the person has a mental disorder, thus a ‘vicious’ cycle of poverty/mental health is created.

Access to treatment and rehabilitation is profoundly affected by poverty. People who can afford treatment, whose family members are able to support them financially and emotionally, who can go to rehabilitation/therapy, have access to housing, job opportunities, and so forth have a considerable recovery advantage. Where a person has minimal financial means they often put an additional financial and emotional burden on the family. The need to plan services directed at people in poverty is evident.

Another example of how an understanding of social determinants can assist intervention planning is in conflict and post-conflict situations. Wars have significant mental health impacts on both soldier and civilian populations. Baingana et al. report that conflicts cause widespread insecurity due to forced displacement, sudden destitution, the break-up of families and communities, collapsed social structures and breakdown in the rule of law and may last even after the conflicts have ended (Baingana et al. 2005). People in war situations may also have experienced or witnessed killings, injuries, or amputations and gender-based violence. In addition, displaced peoples, whether internally or as refugees in other countries often have difficulties adjusting to losses incurred and the new circumstances they find themselves in. Symptoms of mental dysfunction associated with conflicts include sleeplessness, fear, nervousness, anger, aggression, depression, flashbacks, alcohol and substance abuse, suicide, and domestic and sexual violence (Baingana et al. 2005). Increased rates of PTSD and depression have consistently been found (Murthy & Lakshminarayana 2006). Most recently, Hoge et al. (2004) found that soldiers returning from combat in Afghanistan were more likely to have self-reported alcohol abuse problems than pre-deployment troops, while soldiers serving in Iraq had significantly higher rates of depression, anxiety, and PTSD than other troops that had not been deployed or were deployed in Afghanistan (Hoge et al. 2004). Differences between the troops in Iraq and Afghanistan were attributed to the higher direct combat exposure in Iraq.

Studies examining impacts on non-combatants has increased significantly in the past two decades. Table 9.7.9 summarizes studies that have addressed this issue.

Research has clearly demonstrated that war is a major social determinant of poor mental health. Although there is little that public health experts can do to prevent or stop wars, an important public mental health contribution that can be made is to assist the planning of services for people who require help as a result of the impacts of war.

2. Programmes for prevention of mental disorder and promotion of mental health can be organized around the information and knowledge about social determinants of mental health.

The mental health impacts of major social determinants of mental ill health can, to some extent at least, be mitigated through understanding these causes in a nuanced way and adapting interventions based on evidence from public health research. In their review of mental health and poverty, Patel and Kleinman (2003) showed that mental health was related to income insecurity including fear of losing employment, drop in income, and fear of land loss. High levels of hopelessness mediated by shame, stigma, and the humiliation of poverty were also found to decrease people’s psychological ability to cope. Some evidence was also found that social change through changing lifestyles, shifts from rural to urban areas, and lack of social support linked to changed played an important role in the development of common mental disorders. The factor that they found had the most consistent relationship with poor mental health was low education. This level of information can be used to prevent mental health problems developing.

Taking the need for social support as an example of risk for the development of common mental disorder, it is highly feasible for public mental health practitioners to identify poor and vulnerable individuals and assist them in accessing support. In situations of rapid urbanization, for instance, many people lose contact with their families and become isolated. Public mental health practitioners need access to transport and be able to visit communities to provide the necessary support. They need to be able to provide mental health services in a way that is accessible and affordable to the community.

Providing literacy to women is another example where it has been shown that mental health can be promoted through social interventions. Cohen has demonstrated that providing women with information about and ideas from wider worlds, and by empowering them through literacy, it was possible to increase their sense of pride, self-worth, and purpose, and they were more able to exercise greater control of their lives (Coheni 2002).
Table 9.7.9 Impacts of non-combatants of war

<table>
<thead>
<tr>
<th>Country/territories/areas</th>
<th>Population surveyed</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanisan*</td>
<td>Adult household members aged 15 and above, 62% had experienced at least four trauma events in previous 10 years</td>
<td>Depression—67.7% Anxiety—72.2% PTSD—42%</td>
</tr>
<tr>
<td>Afghanisan*</td>
<td>Adults 15 and over. Nearly half had experienced traumatic events</td>
<td>Depression—38.5% Anxiety—51.8% PTSD—20.4%</td>
</tr>
<tr>
<td>Cambodia*</td>
<td>Adults in displaced persons camp</td>
<td>Depression—55% PTSD—15%</td>
</tr>
<tr>
<td>Cambodia*</td>
<td>Young people traumatised at ages 8–12 followed up 3 years later</td>
<td>Depression—41% PTSD—48%</td>
</tr>
<tr>
<td>Iraq*</td>
<td>Kurdish families in camps</td>
<td>PTSD in children—27% in caregivers—60%</td>
</tr>
<tr>
<td>Israel*</td>
<td>Subjects exposed to war-related trauma</td>
<td>At least one PTSD symptom—76.7% Acute stress disorder—9.4%</td>
</tr>
<tr>
<td>Kenya**</td>
<td>Internally displaced people</td>
<td>PTSD—80.2%</td>
</tr>
<tr>
<td>Kosovo*</td>
<td>Adults 15 and over</td>
<td>PTSD—17.1%</td>
</tr>
<tr>
<td>Lebanon*</td>
<td>Adults 18–65 in communities exposed to war</td>
<td>Major depression—16.8–41.9%</td>
</tr>
<tr>
<td>Rwanda*</td>
<td>Community-based sample</td>
<td>PTSD—24.8%</td>
</tr>
<tr>
<td>Sri Lanka*</td>
<td>Civilian population</td>
<td>Somatican—41% PTSD—27% Anxiety disorder—26% Major depression—25%</td>
</tr>
<tr>
<td>Uganda</td>
<td>Civilian population</td>
<td>Depression—52% Anxiety—60% PTSD—39.9%</td>
</tr>
<tr>
<td>West Bank and Gaza Strip*</td>
<td>10–19-year-old children</td>
<td>97.5% had varying levels of PTSD</td>
</tr>
<tr>
<td>West Nile region**</td>
<td>Refugees</td>
<td>PTSD—male 31.6% —female 40.1%</td>
</tr>
</tbody>
</table>

** Extracted from Njenga et al. (2006).
† Neither the methods utilized nor the ages of respondents are standardized across these studies. This figure is thus not intended to give cross-country comparisons, but rather illustrates prevalence found in different studies.

3. Associations and impacts on mental health can be utilized by politicians, economists, and activists to advocate for social change.

The evidence for social determinants having negative mental health impacts alone is unlikely to bring about large social changes. However, when considered together with other reasons for change, the evidence for mental health impacts can add significant weight to arguments for change and can be constructively utilized in advocacy for change. A good example to illustrate this is in the field of women’s mental health.

Women have around a 1:1.5 or 1:2 times higher levels of depression than men. While some variation is no-doubt attributable to biological factors, for example, in the case of post-natal depression, the social role that women play in most societies is critical. Freeman comments that the traditional role of women as primarily the bearers and rearers of children, inferior and obedient to men (socially and sexually), whose productive labour has been within the household and without power in social and political decisions, leaves many women feeling disempowered, dehumanized, and without dignity. Without an internal sense of worth, power, and value, many women withdraw into a depressed existence (Freeman 2007). He remarks further that even where there have been changes in labour market roles for women, rather than meaning equality with men it has usually resulted in women having to do ‘double work shift’—that is, work both at home and in formal employment. Often without recognition, and even censure from the male partner for not carrying out domestic duties adequately, this often results in severe psychological and physical stress. Given traditional gender roles, working-women may also experience guilt about neglecting their children—leading to further stress and internal conflict. Added to this are high levels of domestic violence. The impacts of abuse, especially in the longer term,
are often more sorely experienced on a psychological than a physical level. Undoubtedly, gender discrimination and violence towards women have serious negative impacts on women's mental health.

Analysis of gender discrimination and its consequences reveals numerous economic, social, and health reasons for change. However, the additional fact and evidence for increased prevalence of mental health problems as a result of gender discrimination provides more convincing evidence and reasons which politicians and activists could use in efforts to attain gender equity.

4. Information on social determinants provides the necessary information and impetus for authorities outside of health, that have an indirect responsibility with respect to health, to act accordingly.

Public mental health practitioners do not often have the means to bring about changes to improve mental health; however, they have the information necessary to inform authorities outside of health to make appropriate interventions. For example, because of the high correlation between mental disorder and poverty, special social programmes are usually needed. For example, people may require supported or subsidized housing or to be placed in special skills and job creation programmes or to be supported within the mainstream work environment. Public mental health practitioners have a major responsibility to communicate and persuade officials in departments outside of health to take direct responsibility for providing the necessary social support. Similar to public health practitioners who need to engage authorities involved in water and sanitation supplies to prevent physical diseases, public mental health practitioners too have an important role to play in conveying messages around social actions to be taken to improve people's mental health.

Substance abuse is both a classified disorder in itself and, according to increasing evidence, certain substances such as cannabis may be a direct cause of psychosis (Fergusson et al. 2002). Factors that lead individuals to abuse substances include interacting social, psychological, and biological phenomena. Controlling the use of substances and thereby preventing mental disorder thus requires complex intersected collaborations involving both supply and demand characteristics. Clearly, while health must care and treat abusers—which also forms part of secondary and tertiary prevention—and must lead in prevention programmes such as media campaigns, the social determinants are linked to issues such as poverty and gangsterism that must be addressed primarily outside of the health system.

Prevention and promotion in mental health

A key part of any public health programme is to prevent disease/disorder wherever possible and to promote good health. This is also true of mental health. The WHO suggests that it is useful to conceptualize three categories of primary prevention in mental health—i.e. universal prevention (targeting the general public or a whole population); selective prevention (targeting individuals or subgroups of the population whose risk of developing a mental disorder is significantly higher than that of the rest of the population); and indicated prevention (targeting persons at high risk who are identified as having minimal but detectable signs or symptoms foreshadowing mental disorder or biological markers indicating predisposition for mental disorder). In addition, there should be secondary prevention (interventions to reduce the prevalence, i.e. all specific treatment-related strategies) and tertiary prevention (interventions that reduce disability and includes all forms of rehabilitation as well as prevention of relapses of the illness).

Mental health promotion usually refers to positive mental health, rather than mental ill health, whereas prevention refers to reducing the incidence, prevalence and recurrence of mental disorder. However, there is no clear line between avoiding disease and improving health and well-being. An activity aimed at promoting mental health in a population may also decrease the incidence of disorder or prevent relapse in certain people. As there are numerous determinants of mental health relating to the actions of individuals as well as social and environmental factors, the objectives of mental health promotion and prevention are to foster the individual, social and environmental qualities that enhance mental health and make sure that factors that may lead to mental health problems are avoided (Herrman 2001; WHO 2004).

Research evidence regarding the impacts and outcomes of prevention and promotion in mental health is somewhat limited but has grown significantly since the early 1990s. While the importance of theory, anecdotes, and personal reports in designing and assessing prevention and promotion programmes cannot be discounted, governments and others usually need more rigorous evidence to warrant major expenditure and it is important to research, monitor and evaluate preventive interventions. The WHO has collated a number of studies that document successful mental health promotion and disorder prevention strategies (WHO 2002). Some examples of good practice are shown in Box 9.7.3. Up to now, most of the research on prevention and promotion has been conducted in high-income countries, and it is unclear to what extent many of these interventions can be transported into different cultural and economic settings. Some research though is now being conducted in less well-resourced countries. While 'prevention is better than cure' in all situations, in countries with the highest rates of mental disorder and also the least resources for treatment, the need for prevention is even more profound.

Given the close relationships between mental and physical health that have been emphasized in this chapter, not surprisingly prevention programmes can also be combined. For example, the CHAMP (Collaborative HIV/AIDS Adolescent Mental Health Project), adapted in South Africa as the AmuQhawe programme, is a developmentally-timed programme targeting pre-adolescent children and their caregivers that strengthens personal influences (such as assertive and refusal skills) and interpersonal family influences such as caregiver-child communication, caregiver warmth, and active monitoring of children, with the primary aim of reducing risky behaviour in adolescents. Through improved personal well-being and better relationships, including better communication between parents and children around sensitive issues such as sex, transmission of HIV can be reduced (Petersen & Govender 2007).

In 2007, the National Institute for Health and Clinical Excellence in the United Kingdom collated all systematic reviews, syntheses, meta-analyses, and review papers that dealt with non-pharmacological interventions aimed at promoting positive mental health and preventing disorder in adults (Taylor et al. 2007). Some of their key findings were:

- Following counselling within primary care, people with broad psychological and psychosocial problems showed modest improvements in psychological symptoms in the short term compared with the usual GP care—though recipients of counselling were highly satisfied with the intervention.
Box 9.7.3 Examples of mental health promotion and prevention programmes where scientific evidence of benefit had been found—adapted and selected from the WHO (WHO 2002, 2004)

For mothers during pregnancy and perinatal period

- Home visits during pregnancy and early infancy addressing factors such as maternal smoking, poor social support, parenting skills, and early child–parent interactions has shown positive health, social, and economic outcomes.
- Prenatal and postnatal visits by nurses and community workers to mothers reduced child abuse, led to better vocational adjustment, and better educational achievement in the children.
- Early monitoring of growth development by mothers, along with proper maternal advice by educators and nurses, resulted in better cognitive competence and lower behaviour problems.
- Early stimulation programmes by mothers prevented slow developmental growth in preterm infants and improved growth.
- Breastfeeding, which improves bonding and attachment, has significant benefits to child development.
- Nutrient supplements can prevent neurological impairment (e.g., salt iodization).

For children, adolescents, and schools

- Home visiting programmes for high-risk mothers can prevent children physical abuse and neglect and self-defence for school-aged children can prevent child sexual abuse.
- Self-esteem and life skills can be improved through pro-social behaviour, school based curricula, and improvement of school climate. Training teachers to improve detection of problems and facilitate appropriate intervention provides additional advantages.
- Restructuring the school environment can improve emotional and behavioural functioning of pupils.
- Aggressive behaviour and violence can be reduced through parent training, focused interventions in elementary schools, and comprehensive mental health promotion in primary and middle schools.
- Anxiety disorders can be prevented through individual- and family-based interventions with 'at risk' groups.
- Depression and hopelessness amongst adolescents can be reduced through a resilience-building school-based programme.
- Suicide can be prevented through comprehensive school-based prevention programmes. This includes changing school policy, providing teacher education, parent education, stress management, and providing life skills and a crisis team.

Adults and elderly

- Stress management programmes at work have been found to be effective in preventing adverse mental health outcomes.
- Assistance to individuals who have lost their jobs have been shown to have positive effects on rates of re-employment, quality, and pay of jobs obtained, and to reduce depression and distress.
- Awareness of mental disorder in communities can promote early help seeking behaviour and identification and treatment of severe mental disorder.
- Reducing access to the means to commit suicide is the clearest way for preventing suicide.
- Suicide can be prevented through prescription of psychotropic medicines.
- Head and other injuries can be prevented through legislation around helmets and seat belts.
- Marital and parenting counselling to couples and ‘would-be’ parents can prevent marital stress and child abuse and promote better parenting.
- Caregivers of people with mental disorder who were taught better coping skills showed reduced incidence of depression and somatic complaints.
- Widowed people who were supported and helped with locating community resources developed relationships quicker and showed fewer depressive symptoms.

- Workplace interventions involving either early referral to occupational health services or group-based information and role play sessions can be effective in reducing sickness absence.
- Stress-reducing interventions in the workplace, focused either on the individual or the organization, can help reduce work-related stress.
- Cognitive behavioural interventions are more effective in improving people’s skills for coping than relaxation techniques.
- Family interventions where there is a member with a psychiatric disorder can have a modest positive effect on variables related to the relatives’ burden of care.
Cognitive-behavioural parenting programmes are effective in improving measures related to parental psychological health.

Mass media campaigns, particularly those that include community activities, can have beneficial effects on attitudes towards, and knowledge of, mental health issues. They can also impact on an individual's behavioural intentions and support enhancing behaviours to improve their own well-being.

Participation in physical activity is positively associated with mood, emotion, and psychological well-being.

Despite important developments in mental health promotion and the prevention of disorder, this is still a significant growth area for public mental health—both in terms of research that informs focused prevention and promotion programmes and interventions based on existing knowledge.

Stigma: A major public health challenge

One of the principal obstacles to mental health taking its 'rightful' place in health, is the stigma attached to it. Given that a primary goal of public health is to identify and ameliorate the causes of ill health in a population, addressing stigma is undoubtedly a critical public mental health concern. Stigma prevents people from acknowledging any mental health problem and hence seeking care and treatment; providers are reluctant to treat people with mental disorder; people with mental disorder are alienated from and discriminated against by their families and communities and many people experience rampant harassment (Berzins et al. 2003). Stigma from communities is an important reason for institutionalization of people with mental disorder. As a result of all these factors, the mental health status of populations is compromised.

The extent of stigma is well illustrated in the following two studies. In the United Kingdom, it was found that community respondents perceived people with schizophrenia as unpredictable (77.3 per cent) and dangerous (71.3 per cent). People with range of mental disorder were perceived as difficult to talk to (Crisp et al. 2000). In Nigeria, 96.5 per cent of community respondents believed that people with mental illness are dangerous. Most respondents would not tolerate even basic social contacts with a mentally person with 82.7 per cent saying they would be afraid to have a conversation with a mentally ill person and only 16.9 per cent would even consider marrying a person with mental illness (Gureje et al. 2005).

Public mental health has not found adequate solutions to the issue of stigma. Changing media responses, promoting the idea that mental illness is an illness like any other, and community campaigns educating populations about mental disorder have made some headway, but finding innovative ways to redress stigma of mental disorder remains a major challenge for public mental health.

Conclusion: Will greater emphasis on public mental health make a difference to global health?

It is not only conceptually incorrect to consider health without mental health, but there are major practical ramifications in neglecting the 'mental side of health. Some of the reasons are highlighted in Box 9.7.4, and discussed below:

- There is a high prevalence of mental disorder which takes a significant toll on individuals, families, and the economy. Mental disorder has been shown to have a very significant burden socially and economically. Unipolar depression is currently ranked as carrying the fourth highest burden of all diseases and by 2030 will become the second highest cause of all DALYs lost. It is only through concerted public health interventions that a problem of this magnitude can be addressed—especially given major human resource constraints in mental health.

- Human behaviour or agency is fundamental to health. Health promoting behaviours are dependent, to some extent at least, on healthy mental states. Moreover, the human behaviour change that is necessary to improve health of populations falls squarely in the realm of public mental health. The development of this area is critical for the health of populations.

- There are inextricable links between physical and mental health. Without adequate consideration to improving mental health, physical health is undermined, and vice versa. This applies as much to public health as to clinical health.

- Prevention of mental ill health and prevention of mental disorder is possible. This public health approach is necessary to meaningfully improve mental health status of populations. In addition, prevention of physical diseases can benefit from promoting mental health and preventing mental disorder.

- Accessible, affordable, and acceptable mental health care requires mental health systems, and services that take account of culture, available resources, and an optimal mix of levels of care. Public mental health is needed to facilitate this.

- From health economics, we know that there are cost-effective interventions for mental health and that these are indeed affordable. This information needs to be incorporated into health care delivery.

Recognition of the role that public mental health can play in improving the health of populations is increasing. However, to fully contribute to improving health of populations, what is already known needs to be much more vigorously promoted, advocated, and implemented, and progress with regard to the many gaps still existing in public mental health research and practice needs to be advanced with some urgency.
References


