CHAPTER 10

Global Mental Health

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▶ Introduction

In 2015, all nations united around a shared mission of achieving the Sustainable Development Goals (SDGs). This set of goals represented an exponential advance from the Millennium Development Goals (MDGs), which the SDGs replaced, both in its aspiration to encompass a substantially broader agenda and through its explicit recognition that these were global concerns, affecting all nations, and requiring global actions. One notable example of this transformative vision was the recognition that health burdens went beyond the MDG focus on a selection of infectious diseases and maternal and child health. Noncommunicable diseases, mental health, and substance abuse received recognition, and several targets related to these concerns were specified (TABLE 10-1). At last, it seemed that the decades of science and advocacy had finally allowed mental health to take its rightful place on the global development agenda.

The discipline of global mental health has played a key role in the inclusion of mental health in the SDGs. The field of global mental health was the product of decades of interdisciplinary research and practice in diverse transnational contexts. Governmental and nongovernmental organizations in the United Kingdom such as the Department for International Development (DFID) and the Wellcome Trust funded much of the early work in mental health research and services in low- and middle-income countries (LMICs)

in the later part of the 20th century. A series of publications drawing upon this large body of evidence generated by epidemiologists, clinicians, social scientists, and human rights advocates led to a "call to action" in 2007 to "scale up services for people affected by mental disorders built on the twin foundations of cost-effective interventions and respect for human rights" in all countries of the world, and in particular in LMICs, where the attainment of these rights was most seriously compromised (*The Lancet* Global Mental Health Group, 2007).

For the purposes of this chapter, we consider the definition of "mental health" to include all conditions that affect the nervous system that are leading causes of disease burden. Conditions with a vascular or infectious etiology, such as human immunodeficiency virus (HIV) infection of the brain or cerebrovascular diseases, are excluded here, as they are addressed in other chapters of this text. Mental disorders include intellectual disability, epilepsy, anxiety and mood disorders, psychoses (schizophrenia and bipolar disorders), substance use disorders (alcohol and drug use disorders), and dementia. Thus, this list of health conditions includes disorders that clinicians may categorize as psychiatric, neurological, or substance use disorders. This chapter uses the acronym MNS disorders (meaning "mental, neurological, and substance use disorders"), which is common nomenclature for the World Health Organization (WHO) and other health and development institutions.

[handwritten Arabic annotations in top margin, and "(2015)"]

TABLE 10-1 Mental Health in the Sustainable Development Goals

	United Nations' Sustainable Development Goals
SDG 3	Ensure healthy lives and well-being for all at all ages.
SDG Target 3.4	Requests that countries: "By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being"
SDG Target 3.5	Requests that countries: "Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol"
SDG Target 3.8	Requests that countries: "Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all"

Modified from United Nations Sustainable Development goals: http://www.un.org/sustainabledevelopment/sustainable-development-goals/

This rich interdisciplinary treasure of knowledge laid the foundation for the landmark 2007 *The Lancet* series on global mental health. The authors of this series of articles arrived at the conclusion that the high burden and unmet needs for care constituted a global health crisis. They deliberated on what might be the most urgent, clear, and specific "call to action" for the global health community and, in the end, chose to focus on the needs of those individuals affected by a mental disorder, calling for actions to reduce the treatment gap by scaling up the coverage of services for mental disorders in all countries, but especially in LMICs (*The Lancet* Global Mental Health Group, 2007). The years following the publication of *The Lancet* series witnessed a tangible increase in the attention to the treatment gap in LMICs, as evidenced by the increase in development assistance for mental health, which more than doubled in absolute dollars in the years immediately after 2007 (Gilbert, Patel, Farmer, & Lu, 2015). In 2011, the Grand Challenges in Global Mental Health initiative, led by the U.S. National Institute for Mental Health (NIMH), emphasized implementation research questions as the priorities to reduce the treatment gap for mental disorders (Collins et al., 2011) (**TABLE 10-2**).

The publication of these priorities led to a slew of new research initiatives by the NIMH to support research and training in global mental health as well as a set of international "hubs" for research on task sharing and scaling up mental health interventions, while Grand Challenges Canada supported dozens of projects addressing some of these priorities in a number of LMICs. Simultaneously, a number of global institutions and coalitions began to advocate for mental health.

WHO launched its flagship mental health Gap Action Programme (mhGAP) to scale up care for MNS disorders in 2008 and developed a series of seminal publications that provide guidance to health practitioners in nonspecialist settings regarding treatments for MNS disorders (WHO, 2010); track the status of mental health systems at the country level (WHO, 2015); and establish standards of care for mental health facilities (see www.who.int/mental_health for a comprehensive listing of WHO resources for mental health). This culminated in the Comprehensive Mental Health Action Plan 2013–2020, which was agreed by all nations of the world in 2013, and the establishment of a roadmap for achievement of a broad range of mental health–related targets (Saxena, Funk, & Chisholm, 2013). The Disease Control Priorities Network published its recommendations, targeting governments and development agencies, for which interventions should be scaled up through diverse platforms from the community to specialist care, ultimately forming the mental and neurological health component of the package of interventions for universal health care (Patel et al., 2016). Notably, both the Comprehensive Mental Health Action Plan and the Disease Control Priorities Network recommendations took a much broader view of mental health, emphasizing the continuum from promotion of mental health to prevention of mental disorders, to treatment, long-term care, and inclusion of persons with mental disorders.

Preceding these developments were a number of reform initiatives in specific countries—for example, in Brazil and Italy—that sought to influence and promote a public health approach to mental health care. These efforts aimed to provide community-oriented

Rank	Five Leading Challenges for Global Mental Health
1	Integrate core packages of mental health services into routine primary health care
2	Reduce the cost and improve the supply of effective psychotropic drugs for mental, neurological, and substance use disorders
3	Train health professionals in LMICs to provide evidence-based care for children with mental, neurological, and substance use disorders
4	Provide adequate community-based care and rehabilitation for people with chronic mental illness
5	Strengthen the mental health component in the training of all healthcare personnel to create an equitable distribution of mental health providers

TABLE 10-2 Grand Challenges in Global Mental Health, 2011

Data from Collins, P. Y., Patel, V., Joestl, S., March, D., Insel, T. R., Daar, A. S. (2011). Grand challenges in global mental health. *Nature, 475*, 27–30.

care along with both medical and psychosocial interventions, while strongly emphasizing the priorities of those affected by mental disorders. The ultimate goal was to demonstrate that such approaches could improve access to quality care.

Reforms in Italy began in the 1960s, and reforms in Brazil can be traced to the 1990s, with the psychosocial community center program known as *Centros de Atenção Psicossocial* (CAPS) beginning approximately four to five years prior to the mhGAP initiative. Civil society partnership with mental health professionals to promote a shared vision continued to grow during the twenty-first century. The most notable example was the Movement for Global Mental Health (www .globalmentalhealth.org), which was launched in 2008 as a virtual global alliance. By 2015, the Movement included 170 member institutions representing diverse stakeholders, from academics to civil society representatives. Since 2013, the Movement has been led by persons affected by mental disorders. In several countries, prominent individuals have "come out" with their personal accounts of mental disorders, indicating the growing acceptance of this form of human suffering. The field of global mental health has become a respected discipline in its own right, complete with academic programs and centers in universities around the world, specialist journals and books on the subject, and an annual calendar of scientific events. Not surprisingly, the discipline has been described as having "come of age" (Patel & Prince, 2010).

This chapter is organized in three parts. First, it presents a brief history of global mental health prior to the *The Lancet* series. Next, it discusses four foundations of the discipline: the influence of culture and

social determinants on mental health; the burden and impact of mental disorders (including substance use disorders and neurological disorders); effective prevention and treatment strategies; and the ways that these strategies can be delivered in low-resource contexts. Finally, it considers the limitations of the field as it is currently conceptualized and the strategies for addressing global mental health issues in the future.

▶ **Historical Development of Global Mental Health**

The earliest developments of public mental health care can be traced at least as far back as the early Islamic world of the Middle East, North Africa, and Spain. Although accounts differ, it seems that the first hospitals that cared for persons with mental disorder were established by Islamic physicians during the ninth century CE in Baghdad and Egypt (Dols, 1987). Within a few hundred years, institutional care had spread 3,000 miles to the west in Marrakech (twelfth century) and Fez (thirteenth century), Morocco (Moussaoui & Glick, 2015). Influenced by the practices in Morocco, in the fourteenth century a hospital in Granada, Spain, began to accept persons with mental disorders. In the fifteenth and sixteenth centuries, hospitals for persons with mental disorders were established in at least five cities in Spain. In Northern Europe, there is evidence of the establishment of institutional care that coincides with or predates the founding of the hospitals in Spain (Mora, 2008; Pierloot, 1975). The most famous examples from Northern Europe are Bethlem

Hospital in London, which traces its establishment to the thirteenth century, and the Colony of Geel in Belgium, whose origins date from approximately the same time (Mora, 2008).

The beginning of modern public mental health can be traced to the late eighteenth century, when there was a decided shift in beliefs about the nature of mental disorder. Before this time, "madness" was associated with a loss of rationality, which meant that persons with mental disorders were considered as less than human and, in an effort to restore them to reason, were treated as brutes (Scull, 1989). "Moral treatment," which was developed simultaneously and independently in France (Weiner, 1992), England (Digby, 1985), and elsewhere (Scull, 2015), rejected the notion that mentally ill people lacked reason and suggested, instead, that tolerance and confinement in a well-ordered and pleasant environment could restore a person to rationality and mental health (Grob, 1994). The example of the York Retreat in England, which was established in the late eighteenth century as one of the sites in which moral treatment was developed, gave rise to "a wave of enthusiasm and optimism" for the curability of madness (Scull, 2015). This new perspective on mental disorders and their treatment brought about a powerful movement to abolish the abuses and to establish public systems of institutions that would offer beneficent care and the prospect of recovery to persons with mental disorders. One of the best examples of this advocacy was the work of Jean-Étienne Esquirol, who, after visiting a number of psychiatric institutions in France, wrote a report in 1819 in which he advocated for a state-run system of asylums (Goldstein, 2001). In 1838, France followed Esquirol's advice; other countries established similar systems in first half of the nineteenth century (Scull, 2015). The importance of this form of care for persons with mental disorders can be seen readily in the thousands of articles about asylums that were published in the nineteenth century in the leading English-language medical journals (Cohen & Minas, 2016).

As soon as the public asylums opened, they were filled beyond capacity. Throughout the second half of the nineteenth century, the notion of small curative institutions was abandoned due to increasing demands for services and a reluctance on the part of governments to allocate more funds for the care of mentally ill indigent persons (Grob, 1994; Scull, 1989). In addition, as conditions in the asylums grew worse, the effectiveness of asylum care—an assumption that had underpinned the widespread establishment of asylums—began to be questioned. These developments can be seen in publications in *The Lancet* over a period of 50 years. In 1827, the journal published a

letter decrying the conditions in private asylums and called for "the establishment of public hospitals for insane paupers," and called to task the British Colleges of Physicians and Surgeons for not devoting more attention to these issues (Humanitas, 1827). Thirty years later, *The Lancet* (1857) published an editorial, "The Crime of Lunacy and How We Punish It," that questioned the efficacy of asylums: "They are . . . mere houses of detention." In 1875, the journal established the Commission on Lunatic Asylums to investigate "the treatment, in public and special institutions, of patients laboring under the various forms of mental disease" (*The Lancet*, 1875). The conclusions of the Commission were not positive: "It has been found impossible 'to formulate the system of treatment' either for cure or relief. Practically, there is no general 'system' beyond that which may be described as control" (*The Lancet*, 1877). Thus, by the late nineteenth century, public mental health efforts were inextricably associated with the wretched, overcrowded conditions in asylums: "the positive images of hospitals that had prevailed in the mid-nineteenth century [had given] way to far more negative ones associated with hopelessness, abuse, and ultimately death" (Grob, 1994).

Despite these concerns, the colonial enterprise saw the global expansion of institutional care for persons with mental disorders starting in 1567 when Spain established a psychiatric institution in Mexico City. The first institution of its kind in the Western Hemisphere, it heralded what later became known as colonial psychiatry. Nearly 200 years later, and continuing throughout the nineteenth century and into the first decades of the 20th century, "lunatic" asylums were established by British authorities in India (Basu, 2016; Weiss, 1983). Asylums were also established in French (Edington, 2013; Keller, 2008), Italian (Scarfone, 2016), Dutch (Pols, 2006), Spanish (Meyer, 2010), and other British (Ng & Chee, 2006; Sadowsky, 1997; Swartz, 1999) colonies. These institutions have often been depicted as being a form of racism and a means of exerting social control over indigenous populations (Goddard, 1992; Jackson, 1999; Schmidt, 1967; Swartz, 1999). However, it is also true that asylums in the colonies merely reflected the values and treatments in the home-country asylums of the colonial powers (Weiss, 1983).

Despite deteriorating conditions in asylums (rebranded as mental hospitals and psychiatric hospitals in the United Kingdom and the United States, respectively [Cohen & Minas, 2016]), the number of psychiatric inpatients continued to increase in the wealthy nations of the West. Then, beginning in the 1950s, efforts in North America, Western Europe, and Australia were initiated to remove long-term patients

from psychiatric facilities and provide treatment and care in the community. The incentive for what came to be called *deinstitutionalization* evolved from a convergence of several forces: First, encouraged by successful treatment of soldiers traumatized by their experiences in World War II, psychiatrists became optimistic about their ability to effectively treat mental disorders outside of hospital settings (Grob, 1994). Second, there was a growing awareness that the abusive conditions found in public psychiatric hospitals, as well as the negative effects on patients of long-term institutionalization, were at least as harmful as the chronic mental disorders themselves. Third, caring for patients in large institutions that did not provide effective care was expensive. Finally, the discovery in 1954 of chlorpromazine, the first effective antipsychotic medication, offered people with chronic mental disorders the prospect of living in the community rather than as inpatients (Greenblatt, 1992).

Together, these forces brought about dramatic changes in institutionalized populations. In the United States, for example, 559,900 people were in psychiatric hospitals in 1955; 25 years later, that number had decreased to 138,000 (Goldman, 1983). In Britain, the number of psychiatric inpatients peaked at 148,100 in 1954 and then steadily decreased; by 1985, there were only 64,800 such inpatients (Thornicroft & Bebbington, 1989). In Italy, deinstitutionalization took place somewhat later, but had similar results: Early in the 1970s there were about 75,000 psychiatric inpatients, but that number had dwindled to only 38,000 in 1981 (Morosini, Repetto, De Salvia, & Cecere, 1985).

Deinstitutionalization has had mixed reviews. Although large numbers of patients were discharged from hospitals, many came to be accommodated, at least in the United States, in prisons, nursing homes, and adult homes for mentally disabled persons (Scull, 1985), where the worst aspects of the old asylums were often recreated (Human Rights Watch, 2015; Levy, 2002a, 2002b, 2002c, 2002d). In Europe, some evidence suggests that "reinstitutionalization" has taken place. For example, as the number of psychiatric beds in hospitals has decreased, the number of persons with mental disorders in prisons and forensic hospitals has increased (Fakhoury & Priebe, 2007; Human Rights Watch, 2016; Priebe et al., 2005).

Although deinstitutionalization is considered a global policy (WHO & Gulbenkian Global Mental Health Platform, 2014), it has occurred primarily in Western countries, with a few exceptions. For example, the number of psychiatric hospital beds has increased in South Korea (Kim, 2017). Not only does Japan have the highest rate of psychiatric beds in the world (28.4 beds per 10,000 people), but it also has

the longest average length of psychiatric hospitalization (Imai et al., 2005). Deinstitutionalization has not taken place at all in the great majority of LMICs, such that hospital-based care remains at the center of what exists of those countries' national mental health systems (Saxena, Thornicroft, Knapp, & Whiteford, 2007). A noteworthy exception is Brazil, which, between 1995 and 2005, reduced its number of psychiatric beds by 41% while increasing community services by a factor of 9 (Andreoli, Almeida-Filho, Martin, Mateus, & Mari, 2007). Other research suggests that while psychiatric beds decreased in six South American countries, including Brazil, prison populations have increased substantially (Mundt et al., 2015). It has been noted, however, that the increase in the prison population cannot be definitively attributed to deinstitutionalization (Winkler et al., 2016). More recently, other large middle-income countries have begun reforming their mental healthcare systems: India launched its first national mental health policy in 2014 with similar principles while China has greatly expanded coverage of care for mental disorders through its 686 Project, which refers to the first 6.86 million Renminbi (USD\$ 829,000 in 2004) invested by the Chinese government to free patients from seclusion and restraints throughout the country (Ma, 2012; Patel et al., 2017).

Perhaps the best way to consider the positive and negative effects of deinstitutionalization is to ask the consumers of mental health services whose lives have been most affected by this policy. When that has been done, the answer is clear. Despite the difficulties of life outside the hospital, the relative lack of supportive services, and the effects of stigma and discrimination, former long-term inpatients generally agree they prefer living in the community (Davidson, Hoge, Godleski, Rakfeldt, & Griffith, 1996).

The development of community mental health services was both an impetus for and a product of deinstitutionalization. Although the potential for treating people with mental disorders outside of hospital settings was recognized prior to the discovery of effective antipsychotic medications, the evolution of community-based services came about with the recognition that treatment and care required a range of social and rehabilitation services and involved more than just dispensing medication. Thus, while the definition of community care may have once simply meant care outside hospitals, it now encompasses, at least ideally, professional services in community settings, social reintegration, and support services, such as housing, employment, medical care, and welfare (Tansella & Thornicroft, 2001). The provision of community services to individuals with mental

disorders is now a central principle of global mental health (Alem, 2002; Alem, Jacobsson, & Hanlon, 2008; Hanlon, Wondimagegn, & Alem, 2010; Semrau, Barley, Law, & Thornicroft, 2011; Thara & Padmavati, 2013; Thornicroft, Alem, Dos Santos, et al., 2010; Thornicroft, Tansella, & Law, 2008), though this remains an unfulfilled goal for the vast majority of persons affected by mental disorders globally.

The scientific and policy foundations of global mental health can be traced, at least in part, to activities at WHO that were begun soon after the establishment, in 1949, of a mental health division and an Expert Committee on Mental Health (Lovell, 2014). Two reports by the Expert Committee were of particular importance to the field that would become known as global mental health. The first of these reports, *Epidemiology of Mental Disorders* (WHO, 1960), sought to lay the groundwork for an international system for the classification of the psychiatric disorders and, more generally, to advance the ultimate goal of creating a scientifically rigorous approach to psychiatric epidemiology. Direct outcomes of this work included WHO's international studies of schizophrenia (Jablensky et al., 1992; WHO, 1973), as well as studies of schizophrenia in Mauritius (Murphy & Raman, 1971) and Sri Lanka (Waxler, 1979). In fact, there was a burgeoning of psychiatric research in developing countries during the 1960s (e.g., Lambo, 1960; Leighton et al., 1963; Lin, Rin, Yeh, Hsu, & Chu, 1969), 1970s (e.g., Harding, 1973; Jilek & Jilek-Aall, 1970; Kulhara & Wig, 1978), and 1980s (e.g., Harding et al., 1980; Kleinman, 1980; Kulhara & Chandiramani, 1988). The second of the Expert Committee's reports, *Organization of Mental Health Services in Developing Countries* (WHO, 1975), followed a *British Journal of Psychiatry* series on psychiatric problems in the developing world (Carstairs, 1973; German, 1972; Leon, 1972; Neki, 1973) and recommended many actions to address the burden of mental disorders in developing countries. One of the most farsighted statements in the report was the following: "A number of innovations have been recommended, notably the sharing of mental tasks by a wide range of health workers and by other community agencies."

WHO followed up these recommendations with a series of projects that attempted to integrate mental health services into primary care settings in seven low-income countries (Sartorius & Harding, 1983). Now, more than 40 years later, this strategy remains central to the development of mental health services in low-resourced settings.

As important as all of these projects were, perhaps the "founding" event of global mental health was the publication of the results of the first Global Burden of Disease (GBD) study, which introduced the concept of disability-adjusted life-years, a single measure that represented the burden imposed by both mortality and morbidity (the most recent findings of this initiative are described in more detail later in this chapter) (World Bank, 1993). Prior to this report, infectious diseases were prioritized by international public health efforts. However, the GBD study revealed that non-communicable diseases—neuropsychiatric disorders, specifically—accounted for a significant proportion of the GBD. These findings provided the most compelling evidence that mental disorders were priority public health disorders in low-, middle-, and high-income countries alike. Thus, the GBD study opened the way to the field that became known as global mental health.

▶ Culture and Mental Disorders

It is crucial to understand the role of culture in the experience, diagnosis, and treatment of mental disorder (Kirmayer & Swartz, 2014). Common elements in the definition of culture are "values, beliefs, knowledge, norms, and practices and the notion that that these are shared among a specific set of people" (Hruschka & Hadley, 2008, p. 947). Beliefs refer to conscious psychological processes. Norms are behaviors maintained by social sanctioning and affective responses. Values are valences placed on beliefs, knowledge, and norms that lead to engagement in or avoidance of behaviors. These beliefs, norms, and values shape both lay and professional understandings of mental disorder. This section addresses the following topics: (1) the role of culture in biomedical classification systems; (2) alternative approaches to mental disorder categorization across diverse cultural contexts; and (3) cross-cultural methods and approaches to improve mental health research and services.

Cultural Considerations for Biomedical Psychiatric Classification

Understanding the origins and assumptions of different diagnostic systems is vital to implement best practices in research and clinical care for diverse global populations. The classification of diseases leads, in theory, to more accurate diagnoses and effective treatments. Valid and reliable systems of classification make it possible to determine accurate prevalence and incidence rates and, therefore, should guide decisions about the development of services. The classification of mental disorders, however, presents some unique

challenges. Psychiatric diagnoses do not "carve nature at the joint" and the boundaries between different conditions may not be distinct (Blacker & Tsuang, 1992; Kendler & Gardner, 1998; Tsuang, Stone, & Faraone, 2000). Unlike other diseases, there are no specific and replicable pathophysiological pathways to distinguish most mental disorders in a clinical setting. Moreover, clinical classification in psychiatry is based on the symptom profiles, rather than on the disorders' etiology (as in the case of infectious diseases) or their pathology (as in the case of vascular disease).

Two main biomedical systems of psychiatric classification are used today: the *International Classification of Diseases* [ICD] (WHO, 1990) and the *Diagnostic and Statistical Manual of Mental Disorders* [DSM] (American Psychiatric Association [APA], 2013). These approaches to psychiatric categorization took shape in the late 1800s with the work of Emile Kraepelin and others who developed diagnoses based on standardized factors related to symptom presentation, prognosis, and hereditary risks (Jilek, 1995). Kraepelin and his followers also influenced modern frameworks regarding the incorporation of culture into psychiatric classification. Kraepelin traveled to Java, Sri Lanka, India, Singapore, and the Americas to evaluate his diagnostic criteria with non-European populations. He and his followers developed a model with a biological core for mental disorders (i.e., pathogenic), with cultural influences shaping the presentation of that biological core (i.e., pathoplastic) (Jilek, 1995). For example, hallucinations were considered a universal biologically-determined feature of psychosis whereas culture shaped the content of those hallucinations. Most current classifications (e.g., DSM and ICD) continue this approach with cultural considerations for different conditions while assuming conditions are grounded in a core of presumed universal psychiatric pathology.

These classification systems—DSM and ICD—and their assumption of biological universality are often considered *etic* perspectives in cross-cultural psychiatry. "Etic" refers to a universal classification systems and is contrasted with "emic," which refers to classifications specific to a culture, which may or may not overlap with etic categorizations (Hahn, 1995). The use of the DSM and ICD psychiatric categorizations as overarching etic frameworks applicable across all cultures has been critiqued by some psychiatrists and social scientists (Kleinman, 1988; Kleinman & Good, 1985; Littlewood, 2002). The DSM and ICD do not incorporate all emic divisions from other cultures and medical nosologies, such as Chinese, Ayurvedic, or Q'uranic classifications of

mental disorder. It is argued that classifications of psychiatric disorders largely reflect American and European emic concepts of psychopathology based on implicit cultural concepts of normality and deviance. In addition, the classification systems have not been comparably applied across racial/ethnic groups within the same clinical context. For example, in the United Kingdom and United States, African- and Caribbean-descent populations are more likely to be diagnosed with schizophrenia compared with white/Western European-descent populations with the same symptom profile; the latter are diagnosed with bipolar disorder more frequently than with schizophrenia (Bell, Williamson, & Chien, 2008; Louden, 1995). For a challenge to these claims, see the work of Selten and Hoek (2008) and Singh, Greenwood, White, and Churchill (2007).

Even when comparable symptoms are observed, the social and personal significance of the behavior or experience may not have the same meaning and their explanatory models may differ. Researchers have cautioned that there is a risk of confounding culturally distinctive behavior with psychopathology on the basis of superficial similarities of behavior patterns or phenomena, an assumption referred to as a "category fallacy" (Kleinman, 1987). Within European and North American cultural contexts, there also have been debates about the scope of depression and how it is—or is not—distinguished from normal grief (Wakefield & Demazeux, 2015).

Due to these shortcomings, cross-cultural studies in psychiatric epidemiology historically have suffered from several problems. For example, case identification techniques varied from site to site, and methods were not standardized (Gorenstein, 1992). These inconsistencies led to a movement to standardize the process of psychiatric measurement and diagnosis so that diagnoses would be more replicable among clinicians and across patient populations. In the United States, one expectation since the third edition of the DSM (APA, 1980) was that this kind of standardization would help to reduce bias and increase the reliability of diagnoses across populations and among clinicians. Similarly, the tenth revision of the ICD (ICD-10) was developed with the explicit purpose of being an international standard (WHO, 1990). Thus, efforts were made to ensure that the drafters of the ICD-10 were drawn from as many countries as was feasible, and the revised system of classification was field-tested by more than 700 clinicians in 39 countries from all continents. The vast majority of ICD-10 conditions have reasonable reliability (Sartorius et al., 1993).

In preparation for the ICD-11, which was due to be published in 2018, one approach to explore cultural bias has been to evaluate how clinicians across cultures categorize disorders based on their clinical experiences. In a study of 517 clinicians in eight countries ranging from Brazil to India to Japan, clinicians had strong inter-rater agreement regardless of their national or cultural origin (Reed et al., 2013). The same study found that the cross-cultural categorizations were generally consistent with DSM and ICD, but the clinician-generated categories were more consistent with the proposed changes for ICD-11 compared to the DSM-IV or ICD-10, in particular with regard to personality disorders.

Critiques of cultural biases in diagnoses are part of a broader movement in psychology that has detected biases when the vast majority of research is based on a single population demographic. This problem has been referred to as the bias of psychology research being dominated by WEIRD populations (Western, Educated, Industrialized, Rich, and Democratic), which account for 90% of psychology publications (Henrich, Heine, & Norenzayan, 2010b). When psychological studies have been conducted with non-WEIRD populations, researchers have discovered that presumed universal processes such as visual perception, spatial reasoning, and behavioral motivation related to fairness and cooperation have cultural variations. In addition, it is important to consider that diagnostic criteria of syndromes can and do change over time, as is well demonstrated by the regular revisions of international psychiatric classifications, and that these changes are considerably influenced by attitudinal, political, and historical factors. Anthropologists have investigated how diagnoses are developed out of specific social, economic, and political environments; for example, there are in-depth historical accounts with anthropological critiques of disorders including posttraumatic stress disorder (PTSD) (Young, 1995), bipolar disorder (Martin, 2007), and dissociative disorders (Hacking, 1998).

Fifty years of research suggests that concepts of psychosis are remarkably similar across diverse settings (Cohen et al., 2016). Cross-cultural reviews of depression, PTSD, and other conditions have found that some symptoms may vary across cultures, though they have also found many universals. In a systematic review covering 178 social groups (varied by location, ethnicity, culture, and/or geography), of which 115 were non-Western populations, DSM hallmark symptoms of depressed mood/sadness, fatigue/loss of energy, problems with sleep, appetite/weight problems, and suicidal thoughts were common across all groups (Haroz et al., 2017). At the same time, the review revealed that some symptoms with near universality are not captured in current biomedical classifications. For example, symptoms such as social isolation/loneliness, crying a lot, somatic complaints, and thinking too much were among the most common symptoms but are not included in DSM criteria. Even among Western populations, the symptoms of social isolation and crying a lot were among the top 10 most associated with depression. In contrast, DSM diagnostic symptoms such as psychomotor agitation/retardation, feelings of worthlessness/guilt, and poor concentration were not among the top 10 associated symptoms in Western and non-Western cultural groups.

A cross-cultural review of PTSD concluded that while this diagnosis is generally "valid"—that is, it reflects the reality of human experience across populations—there is considerable cultural variability (Hinton & Lewis-Fernandez, 2011). The PTSD review highlighted cultural differences in the meaning and interpretation of trauma symptoms, the prevalence of the diagnosis across groups, the prevalence of specific symptoms such as those related to avoidance and numbing, the likelihood that a person of one culture will develop PTSD compared to a person of another culture given the same trauma exposure, and the association with nontraumatic stressors. These types of cross-cultural systematic reviews are helpful to identify potential cultural biases in psychiatric diagnoses and to point us toward approaches that may be more appropriate across populations.

Alternative Approaches to Categorize and Conceptualize Mental Disorders

Historically, classifications of mental disorders prior to the DSM and ICD have existed in different cultures. All cultures have some form of distinguishing normal from abnormal, or socially acceptable versus unacceptable behavior, and this is often the province of religious practitioners and traditional healers (Clifford, 1990; El-Islam, 1982; Kleinman, 1980; Kohrt, Hruschka, Kohrt, Panebianco, & Tsagaankhuu, 2004; Weiss et al., 1988).

As an example, the first Chinese Classification of Mental Disorders (CCMD) appeared in 1979; since then, the system has undergone several revisions. Its third and most recent version is heavily influenced by the ICD-10 and DSM-IV systems, but still retains local features. The main differences between the ICD-10 and the CCMD-3 are the CCMD-3's retention of the term "neurosis" and categories of neurotic disorders such as neurasthenia (Lee, 2001). Personality disorders are

Cross-Cultural Methods and Approaches for Mental Health Research and Services

Ultimately, diagnostic categories are a moving target, as they are continually being transformed by improved biocultural research that seeks to better understand mechanisms and improve the fit between types of interventions and persons with psychological distress. As diagnoses continue to change, it is crucial to have a set of rigorous methodologies that can integrate culture into global mental health research and interventions. Examples of these rigorous methods are transcultural translation and validation procedures for assessment and the Cultural Formation Interview for clinical care.

Cultural equivalence is needed for psychiatric assessment tools used for research, screening, and treatment monitoring. Lack of cultural equivalence risks category fallacies and under-, over-, and misdiagnosis. A tool is considered to have cultural equivalence (i.e., measurement invariance) if it measures the same construct across cultures. Content, semantic, technical, criterion, and conceptual equivalence are needed to achieve measurement invariance (Flaherty et al., 1988). These are defined as follows:

- *Content equivalence:* Does the phenomenon in question occur and is it locally recognized as distressing within the target culture?
- *Semantic equivalence:* Does the meaning of each item remain the same after translation?
- *Technical equivalence:* How does the method used in data collection affect results differentially between cultures? Technical methods could encompass response options on scales, item structure, and administration format (e.g., pen and paper, computerized assessment, interview administered). Challenges have been identified with the use of Likert scales, statements versus questions, positive versus negative wording, and pictorial response scales (Kohrt et al., 2011; Weobong et al., 2009).
- *Criterion equivalence:* What is an instrument's relationship with previously established and independent criteria for the same phenomenon? According to criterion equivalence, there should be comparable psychometrics (e.g., sensitivity, specificity, positive predictive value, negative predictive value) with a known marker, oftentimes a structured clinical interview.

There are now best practices for transcultural translation and validation that incorporate qualitative methods followed by a clinical validation study to establish psychometric properties, which have been used for both adult and child populations (Kohrt et al., 2011; Van Ommeren et al., 1999). This transcultural translation approach involves qualitative interviews including focus group discussions with target groups and cognitive interviewing, accompanied by a series of translations and back-translations, followed by a clinical validation study.

Regarding clinical services in global mental health, the cultural formulation interview (CFI; **EXHIBIT 10-1**) in DSM-5 is a new tool that can be applied to any patient or population and assures that cultural factors are integrated in diagnosis, treatment planning, and delivering care (APA, 2013). The CFI was developed to assess five components: (1) cultural identity of the individual, (2) cultural explanations for an illness, (3) cultural factors contributing to psychosocial environment and functioning, and (4) cultural factors influencing the clinician–patient/client relationship. Value must be placed on both folk beliefs about mental disorder and the biomedical system of psychiatry. It is important to investigate patients' "explanatory models"—that is, how patients understand their problems, including their nature, origins, consequences, and remedies, as these

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EXHIBIT 10-1 Cultural Formulation Interview in DSM-5

This CFI is a tool for clinicians and treatment teams to improve mental health services by assuring that cultural factors are integrated into diagnoses, treatment planning, and delivery of care. The CFI includes four components:

- Cultural definition of the problem: Explanatory models including prominent idioms of distress, reasons for treatment seeking, and impact on functioning.
- Cultural perceptions of the cause, context, and support: Cultural models of causation, impact on and influence of one's social network, culturally relevant interpretations of social stressors, and cultural identity of the individual.
- Cultural factors affecting self-coping and past help-seeking: Self-coping, past help seeking, and prior barriers to care and recovery.
- Cultural factors affecting current help seeking: Patient preferences related to social networks and religion, and clinician–patient relationship factors. The provider must identify differences and similarities in cultural and social status that might influence diagnosis and treatment.

Modified from American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders: DSM-5. Washington, DC. American Psychiatric Publishers, Incorporated.

aspects of understanding can radically alter patient–provider negotiations over appropriate treatment (Kleinman, 1988). The CFI can be used at individual, family, and community levels to inform clinical services and public health efforts in global mental health.

Ultimately, findings across diverse disciplinary approaches increasingly point toward commonalities for understanding mental disorder across cultural groups. As noted earlier, common manifestations and pathways for healing have been identified. Moreover, studies that have shown differences across groups have often shed light on the limitations of psychiatric practices that need to be changed to improve care in high-resource, Western cultural settings as well as in LMIC contexts. This point not only highlights the importance of cross-cultural work for global mental health in low-resource, non-Western settings, but also suggests how global mental health research can better inform mental health categorizations in high-resource, high-researched settings.

▶ The Determinants of Mental Disorders

The etiology of mental disorders comprises a complex interplay among biological factors, most notably genetic predisposition, developmental factors, and psychosocial factors. Until the 1950s, the dominant notions about the etiology of mental disorders were hereditary and environmental in nature. For example, schizophrenia was attributed to abnormal parenting, and obsessive–compulsive disorder to "anal aggression." Beginning in the 1960s, however, a more balanced view emerged. Consensus was reached that both environmental and genetic influences contribute to the development of mental disorders. Psychotic conditions, which historically have been thought to arise predominantly from biological risk factors, have increasingly been shown to be strongly influenced by social determinants (Kirkbride et al., 2006; McGrath et al., 2004). The observation that many disorders have their onset in childhood and youth have placed focus on the developmental origins of these disorders (e.g., related to brain development during childhood and adolescence).

Although risk factors for the majority of mental disorders present themselves in childhood and adolescence, the major burden of mental disorders is found in early adulthood (Murray et al., 2012). Indeed, a range of childhood adversities, such as neglect and parental mental illness, are strongly associated with numerous mental disorders in later life, presumably due to the impact of "toxic stress" on the developing

brain. These factors can be divided into risk factors and protective factors. Risk factors make it more likely that an individual will develop mental health difficulties, whereas protective factors mediate and reduce the effects of risk exposure. Risk and protective factors can exist in the biological, psychological, and social domains (TABLE 10-3). Many risk factors for mental disorder also predispose persons to a host of physical health and social problems. Adverse childhood experiences (ACEs), such as child abuse and domestic violence, loss of caregivers, nutritional deprivation, and severe childhood illness, are exposures that increase the risk of physical diseases (e.g., cardiovascular and metabolic disease), mental disorders (e.g., suicide, substance abuse, and common mental disorders), and early mortality (Anda et al., 2006; Van Niel, Pachter, Wade, Felitti, & Stein, 2014).

The question was therefore changed from *which* factors were relevant for a specific disorder, to *how much* each contributed to the condition. Ultimately, this question, too, proved to be based on an incorrect assumption—namely, that the environmental, developmental, and genetic factors exert their influences in an additive and independent manner. There is now recognition that they exert their influences in an interactive manner, which develops over the life course. Contemporary scientists are attempting to address the question of *how* they interact.

The Social Determinants of Mental Disorders

The social determinants of mental disorders may be organized into five broad domains (Lund, De Silva, & Stansfeld, 2014):

1. The economic domain, which includes poverty, income, consumption, assets, income inequality, and employment
2. The social domain, which includes social capital, social cohesion, and education
3. The demographic domain, which includes age, gender, and ethnicity
4. The neighborhood domain, which includes the area-level social and economic arrangement of people's lives such as housing, water and sanitation, and transport
5. The environmental events domain, which includes natural disasters, such as floods, earthquakes, and climate change, as well as civil conflict and forced migration

Each of these domains exerts its influence on population mental health by means of both distal factors

→ Very easy.

TABLE 10-3 Selected Risk and Protective Factors for Mental Health

Domain	Risk Factors	Protective Factors
Biological	- Exposure to toxins (e.g., tobacco and alcohol) during pregnancy - Genetic tendency to psychiatric disorder - Head trauma - HIV/AIDS and other physical illnesses	- Age-appropriate physical development - Good physical health - Services provided at mother–baby clinics
Psychological	- Maladaptive personality traits - Effects of emotional, physical and sexual abuse, and neglect	- Ability to learn from experiences - Good self-esteem - High level of problem-solving ability - Social skills
Social		
Family	- Divorce - Family conflict - Poor family discipline - Poor family management - No family	- Family attachment - Opportunities for positive involvement in family - Rewards for involvement in family
School or workplace	- Failure to perform at the expected level - Low degree of commitment to school or workplace - Inadequate/inappropriate educational provision or training opportunities - Experiences of bullying and victimization	- Opportunities for involvement in school or occupational activities - Supportive, stimulating school environment that is tailored to children's developmental needs
Community	- Community disorganization - Effects of discrimination - Exposure to violence - Social conflict and migration - Poverty - Transitions (e.g., urbanization)	- Connectedness to community - Opportunities for constructive use of leisure - Positive cultural experiences - Positive role models - Rewards for community involvement

Modified from World Health Organization (WHO). (2015). *Child and adolescent mental health policies and plans.* Retrieved from http://www.who.int/mental_health/policy/Childado_mh_module.pdf

("upstream" social and structural factors, such as social policy, macro-economic trends, and environmental disasters) and proximal factors (the manner in which these distal factors are experienced by individuals and their families, such as employment, housing quality, and trauma).

Environmental Events Domain

According to the United Nations High Commissioner for Refugees (http://www.unhcr.org/4981c3dc2.html),

as of 2007 an estimated 11.4 million refugees had fled their own countries, another 13.7 million were internally displaced, and 2.9 million were not considered citizens of any state. Many of these refugees have experienced enormous trauma in the form of violence, crime, or other humiliations; physical injury; economic dispossession; and disruption of family and community structures. Thus, the rates of mental disorders among these people would be expected to be at least as high as—and probably higher than—those for migrants in general. A study of more than 3,000 respondents

dysthymia, making depressive disorders the largest contributor to the burden of disease, as measured by DALYs in the mental disorder group. The global prevalence is higher in females (5.1%) than in males (3.7%), and in countries where war and conflict are more prevalent. For example, Uganda had the highest rate of depressive disorder DALYs—although with the wide uncertainty estimates, this was not significantly different from the global mean. There is also a clear socioeconomic gradient in prevalence in many countries, with individuals having lower socioeconomic status also having increased risk for depression and anxiety disorders (Lund et al., 2010). Individual anxiety disorders are common and frequently co-occur with each other.

To prevent over-counting, GBD 2015 provides estimates for any anxiety disorder—a grouping that includes generalized anxiety disorder, panic disorder, and phobic disorders (agoraphobia, social phobia, and specific phobias) (Baxter, Vos, Scott, Ferrari, & Whiteford, 2014). It also includes obsessive–compulsive disorder, post-traumatic stress disorder, and acute stress disorders, although these are no longer classified as anxiety disorders in DSM-5. In 2015, the global age-standardized prevalence for all anxiety disorders combined was 3.6% (4.6% for females and 2.6% for males), making these disorders the second largest contributor to the burden of disease imposed by MNS disorders, as measured by DALYs. As is true for depression, there is considerable variability in the estimates, with anxiety disorder prevalence being impacted by factors such as sex, age, culture, conflict, urbanicity, and economic status (Baxter, Scott, Vos, & Whiteford, 2013). For example, a systematic review and meta-analysis of post-traumatic stress disorder alone in the general population in areas exposed to conflict found the prevalence to be 12.9%, after controlling for an extensive range of covariates (Charlson, Baxter, Cheng, Shidhaye, & Whiteford, 2016).

Schizophrenia

The age-standardized prevalence of schizophrenia was estimated in the GBD studies to be approximately 3% globally. This prevalence did not change from 1990 to 2015; however, the number of people with schizophrenia increased from 14.4 million to 23.4 million during this period, due primarily to population growth and aging. In 2015, schizophrenia contributed 15.5 million DALYs to the overall burden of disease globally, with roughly equal burdens noted in males and in females. Substantially higher prevalent cases and DALYs of schizophrenia were found lower-income regions of the world—a reflection of population size, but

also coinciding with the highest treatment gaps. For example, China had the highest rate of schizophrenia DALYs, but this was closely followed by the U.S. rate, and neither country's rate was significantly higher than the global mean.

Bipolar Disorder

The global age-standardized prevalence of bipolar disorder was estimated at 0.5% across both sexes. As with the majority of mental disorders, the prevalence of bipolar disorder remained unchanged between 1990 and 2015, but due to population growth and changing age structures, the number of people with bipolar disorder increased from approximately 30 million in 1990 to 44 million in 2015. In terms of burden, bipolar disorder was responsible for 9 million DALYs, equating to 0.35% of all global DALYs in 2015. The DALY rates were consistent across the globe, with the difference between the lowest country estimate (China) and the highest country estimate (New Zealand) not differing significantly.

Substance Use Disorders

The burden of substance use disorders varies considerably across and within countries, between subgroups in a given population, and according to the substance being abused. Unlike other mental and neurological disorders, variations in substance use burden are influenced by additional factors, such as supply and availability of drugs, which can change prevalence and, in turn, burden. If dependence on tobacco (arguably the most common substance to be abused) is excluded, alcohol use disorders (AUD) are the most common substance abuse disorder in most countries. While AUD can refer to the entire range of health conditions associated with drinking alcohol above the recommended limit established by WHO, alcohol use disorders in the GBD studies refer only to alcohol dependence as defined by the ICD. Illicit drugs are those substances whose use outside medical settings has been prohibited under international and national control systems. In the GBD study, the drugs whose burden is estimated are opioids (including heroin), cannabis, amphetamines, and cocaine.

Globally, AUD were the most prevalent substance use disorders, with 63.5 million estimated cases in 2015. Cannabis dependence and opioid dependence were the most common illicit drug use disorders (19.8 million cases and 16.7 million cases, respectively). There were substantial geographic variations in the burden of disease and contrasting patterns for the association between total alcohol and illicit drug-attributable burden and per

estimated at AUD$ 278 million (USD$ 190 million), and income support for those individuals has been estimated at AUD$ 407 million (USD$ 278 million) in 2009 terms. The total impact on GDP of this group for this disorder alone was estimated at AUD$ 1.7 billion (USD$ 1.2 billion) (Schofield et al., 2011). The value of informal caring provided by family members was approximately AUD$13.2 billion (USD$10.3 billion) in 2015 (Diminic et al., 2016), much greater than the AUD$ 8 billion (USD$ 6.3 billion) that the national and state governments spent on mental health services in Australia.

Although the economic burden is large, increased spending within the health sector to increase treatment coverage for mental disorders appears to be more than offset by economic productivity gains and reduced outlays on social and income support (OECD, 2015; Wang et al., 2007). Evidence-based health and social interventions can avert the long-term cost burden and have a broad range of payoffs, both within the public sector and more widely, such as through better educational performance, improved employment/earnings, and reduced crime (Knapp, McDaid, & Parsonage, 2011). The view that treatment of mental disorders in LMICs is prohibitively expensive is a myth that needs to be dispelled. A fully scaled-up package of mental health care in sub-Saharan Africa and south Asia, based on a comparative cost-effectiveness analysis of 44 individual or combined interventions, has been estimated at USD$ 3 to USD$ 4 per person within a population (Chisholm, Naci, Hyder, Tran, & Peden, 2012). Of course, scaled-up treatment of common mental disorders globally can lead to large productivity gains. In a model consisting of 36 countries between 2016 and 2030, USD$ 230 billion was needed for scaled-up treatment of depression and USD$ 169 billion for scaled-up treatment of anxiety disorders (Chisholm, Sweeny, et al., 2016).

▶ Interventions → Just know the titeles without dikdes.

This section briefly considers the role of mental health policies, human resources for mental health care, and the evidence for the prevention and treatment of mental disorders.

Mental Health Policies and Plans →

A mental health policy presents the values, principles, and objectives for improving mental health and reducing the burden of mental disorders in a population. It should define a vision for the future and help to establish a model for action. A policy should be distinguished from a plan, which is a strategy for implementing actions to achieve the objectives of a policy.

In some countries, mental health policies are restricted to psychiatric services. However, a broader scope is preferable—one in which mental health services in general are addressed. These services may include primary care and specialized care, as well as all aspects of intervention—that is, promotion, prevention, treatment, and ongoing care (WHO, 2003c). Policies need to address the coordination between mental health services themselves, as well as between mental health services and other services such as housing, education, and employment. Other key issues that policies should address include financial arrangements for the private and public sectors, expenditure prioritization, and individual and organizational capacity development (WHO, 2003a). Finally, policies need to provide for continuous evaluation of mental health outcomes to ensure that those policies remain appropriate to contemporary circumstances and lead to effective services.

A country's capacity to deliver appropriate mental health services to its population is seriously hampered by the absence of a mental health policy. Thus, it is cause for concern that only 68% of countries (77% of those that responded to the WHO survey) have mental health policies (WHO, 2014). LMICs are less likely to have these kinds of policies: For example, only 71% of countries in Africa have established such policies. This is, however, a substantial improvement in recent years: In 2001, only 50% of African countries in Africa had established mental health policies (WHO, 2001).

Partly in response to this shortcoming, WHO developed the Mental Health Policy and Service Guidance Package during 2000–2005. This package consists of a series of interrelated, user-friendly modules designed to assist with policy development and service planning. One module provides a series of steps that can be taken to develop mental health policies: (1) assess the population's needs; (2) gather evidence for an effective policy; (3) consult and negotiate; (4) exchange ideas with other countries; (5) set out the vision, values, principles, and objectives of the policy; (6) determine areas for action; (7) identify the roles and responsibilities of different sectors; and (8) conduct pilot studies (WHO, 2005b).

Human Resources for Mental Health Care

The implementation of mental health policies and plans depends on both the quantity and the quality of the personnel available to implement interventions. There are vast differences among regions of the world

interventions that are harmful. If they are, they should receive education and counseling that aim to reduce exposure to such negative interventions. Conversely, traditional practices that are helpful can be incorporated into allopathic care (Institute of Medicine, 2001).

Prevention and Treatment of Mental, Neurological, and Substance Use Disorders (MNS)

Interventions for mental disorders have progressed enormously in the past few decades. The *Disease Control Priorities*, third edition (DCP-3), released by the World Bank, provides a synthesis of the evidence base and recommendations for the packages for prevention and treatment of MNS disorders (Patel et al., 2016). These recommendations identify the specific interventions for each group of disorders (**TABLE 10-6**) and the platforms through which they can be scaled up (**TABLE 10-7**).

① Population-Level Recommendations

Evidence-based population-level recommendations include legislative measures to restrict access to means of self-harm and suicide (e.g., limiting access to guns and pesticides, such as through the use of lockboxes) and limiting availability of and demand for alcohol (e.g., through taxation and increased prices). Effective interventions, strategies, and policies to prevent and reduce substance use disorders can be categorized as regulatory, community based (including education), and health services based.

Prohibition has been attempted for alcohol products and is currently in place in some countries; this policy is also used with classes of substances including opioids, cannabinoids, and cocaine in most countries. Although prohibition can dramatically reduce substance use disorders in the short term, its costs in terms of civil disobedience and crime are enormous—so much so, that, in general, prohibition is not regarded as an acceptable policy option, with the exception of specific circumstances, such as drinking alcohol and driving (Wolf & Midanik, 2013).

Regulatory interventions include taxation, restrictions on availability, and total bans on all forms of direct and indirect advertising. Increases in alcohol taxes, for example, have been shown to reduce both the prevalence and the consumption of alcohol products. For young people, laws that raise the minimum legal drinking age reduce alcohol sales and problems among young drinkers. Reductions in the hours and days of sale, numbers of alcohol outlets, and restrictions on access to alcohol are all associated with reductions in both alcohol use and alcohol-related problems.

A meta-analysis of studies in LMICs found a strong inverse effect between alcohol consumption and alcohol price and/or taxation (Sornpaisarn, Shield, Cohen, Schwartz, & Rehm, 2013), which is comparable to the impact of increasing price/taxes and decreasing consumption in high-income countries.

At the population level, there is also good practice evidence for interventions that seek to raise mental health literacy and reduce stigma and discrimination (Thornicroft et al., 2016). Social contact interventions, in which people engage with persons with mental disorders in recovery, changes attitudes and has the potential to instill behavior change (Corrigan, Morris, Michaels, Rafacz, & Rusch, 2012). Interventions within the criminal justice system are effective means to reduce alcohol and drug use, and to treat behavior disorders in adolescents and psychosis among adults. For example, mental health input in the criminal justice system can prevent the inappropriate imprisonment of people with mental disorders, make treatment for mental disorders available in prisons, and reduce the mental health sequelae of imprisonment for prisoners and their families. In high-income countries, mental health training of police through crisis intervention teams (CIT) reduces incarceration, increases mental health treatment, and reduces violence experienced both by police and by persons with mental disorders (Compton, Broussard, Munetz, Oliva, & Watson, 2011). There is increased attention to CIT and similar models in LMICs. For example, in Liberia, CIT training of police both improved mental health outcomes and reduced use of physical force against persons in acute psychological distress during the 2013–2016 Ebola outbreak (Kohrt, Blasingame, et al., 2015).

② Community-Level Recommendations

Community-based mental health care is a major objective of the World Psychiatric Association and other mental health advocates and practitioners (Thornicroft et al., 2010). Life-skills training in schools to build social and emotional competencies is an example of a best practice to reduce the burden of MNS disorders. Systematic reviews of mental health promotion for children and adolescents have shown that school-based programs improve self-esteem, motivation, and self-efficacy (Barry, Clarke, Jenkins, & Patel, 2013; Fazel, Patel, Thomas, & Tol, 2014). Community mobilization and education have been used to prevent substance abuse in many countries. A crucial setting for prevention is in schools, where the goal of most alcohol education programs is to change adolescents' drinking beliefs, attitudes, and behaviors, or to modify factors such as general social skills and self-esteem

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EXHIBIT 10-3 Community Care for Severe Mental Disorders in Low-Resource Settings

A community mental health program for severe mental disorders in a rural setting in India was initiated in partnership with Ashagram ("village of hope"), a nongovernmental organization (NGO) working toward the rehabilitation for people affected by leprosy. The NGO was located in Barwani, one of the poorest districts in India. Mental health care was routinely provided through an outpatient clinic that required patients to travel to the hospital to be assessed and to receive treatment.

A community-based rehabilitation (CBR) model was devised for patients with chronic schizophrenia, based on a three-tiered service delivery system. CBR relies on the active participation of the disabled and their families in rehabilitation and takes specific notice of prevailing social, economic, and cultural issues. The highest tier was outpatient (OP) care. All patients were started on antipsychotic medication. The second tier consisted of mental health workers (MHWs) drawn from the local community. After a 60-day training program, the MHWs worked with patients, families, and the local community in providing services. Each MHW served five or six contiguous villages and carried a total caseload of 25 to 30 patients, including some of the study subjects. The third tier consisted of family members and other key persons in the community who formed the local village health groups (*samitis*). These groups served as a forum for the members to plan relevant rehabilitation measures and reduce social exclusion.

The evaluation of the CBR program showed that, among patients who actively participated, this model was more effective than standard outpatient treatment, as determined by a range of clinical and functional outcomes (Chatterjee, Patel, Chatterjee, & Weiss, 2003). A four-year follow-up of the cohort of persons in the CBR care arm showed that adherence with medication and participation in self-help groups predicted a favorable outcome (Chatterjee, Pillai, Jain, Cohen, & Patel, 2009). A subsequent randomized controlled trial of this intervention in three sites confirmed its beneficial effects in reducing levels of disability in people with chronic schizophrenia in India (Chatterjee et al., 2014). Because a lack of professional resources is a reality in LMICs, the CBR method takes advantage of active local community participation and low levels of technical expertise to deliver services.

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that are assumed to underlie adolescent drinking. Structured universal interventions for children in settings of armed conflict have positive effects for behavior, self-esteem, and coping.

The most effective promotion initiatives take a multicomponent approach by integrating their activities with programs on topics such as microfinance or reproductive and sexual health education. Stand-alone mental health promotions, such as only doing cognitive-behavioral therapy, have produced fewer benefits. Other good practices include parenting programs with infants for early child development.

Community care using locally available resources is a key strategy for enabling people with severe mental disorders and disabilities to remain in the community. One such example is the Ashagram model in rural India (EXHIBIT 10-3).

Preventive efforts directed toward reducing the risk factors for epilepsy and developmental disabilities have focused on improving prenatal care and promoting safe delivery. Other preventive strategies include better fever control in children; strategies aimed at reduction of the causes of brain injury, such as children's use of safety seats and helmets; control of infectious and parasitic diseases that infect the brain; genetic counseling; screening programs for conditions that are known to be associated with mental handicaps, such as hypothyroidism; micronutrient supplementation, such as with iodine; and reductions in environmental levels of toxins such as lead.

Healthcare-Level Recommendations

Best practices at the healthcare level include self-management psychological interventions, such as web-based psychological therapy for depression and anxiety. Given the tremendous treatment gap, the lack of available mental health specialists in most of the world, and the desire to move treatment from institutions to communities, numerous efforts are being made to deliver mental health through primary care (Gwaikolo et al., 2017; Lund et al., 2012; Petersen et al., 2016; WHO, 2010). A key innovation to attain this goal is to address the supply-side barrier of inadequate mental health specialists through task sharing of front-line interventions with nonspecialist health workers. A growing evidence base testifies to the effectiveness of nonspecialist providers in facilitating management of a range of mental disorders, typically in primary care and community settings (van Ginneken et al., 2013).

Perhaps the strongest evidence base supports task sharing of psychological treatments among primary care workers, community health workers, and non-healthcare providers in the community (EXHIBIT 10-4). In Uganda, interpersonal therapy (IPT) was adapted so that it could be delivered by highly supervised lay

Studies have explored the role of lay community health workers in primary and secondary prevention (Mutamba, van Ginneken, Smith Paintain, Wandiembe, & Schellenberg, 2013). For example, prevention studies in LMICs have shown that such interventions can reduce the burden of depression and PTSD in adults. Antenatal programs to prevent postpartum depression have led to improvements in other health outcomes related to children and mothers, such as mother–infant engagement (Rahman et al., 2013). There is also a growing evidence base on "early interventions," such as supportive psychotherapy and low-dose antipsychotic agents, that may delay or prevent progression to a first mental disorder episode (McGorry, 2015). Reducing the duration of untreated psychosis at the onset of schizophrenia can dramatically impact the life course of the illness (Fusar-Poli et al., 2009). This consideration is especially important in LMICs, where the duration of untreated psychosis can average two years, and it is not uncommon to go more than five years without initiating treatment (Thirthalli et al., 2011).

According to DCP-3 guidelines, at the healthcare level, hospital care is recommended as a best practice for delivery of MNS specialty services for severe, refractory, and emergency presentations of MNS disorders. In addition, mental health care should be integrated into other specialty services ranging from obstetric and gynecologic care to infectious diseases services to oncologic treatment.

Humanitarian Emergencies

Mental health services are especially important to address the acute and chronic needs of populations affected by complex humanitarian emergencies, such as war, environmental disasters, earthquakes, and other causes of forced displacement. Refugees, internally displaced persons, and other survivors of collective trauma are at an increased risk of MNS disorders. Unfortunately, populations affected by humanitarian emergencies live in settings where the health, and especially the mental health, services sector may have been limited or nonexistent even before the disaster. There is a heightened need to identify and allocate resources for providing mental health care and psychosocial support in these settings, both for those with disorders induced by the emergency and for those with preexisting disorders.

Guidance on mental health and psychosocial response is available through the Inter-Agency Standing Committee (IASC, 2007). WHO (2015) has also released a Humanitarian Intervention Guide version of mhGAP, which provides treatment recommendations for acute emergency response and includes trauma and grief-related conditions not covered in the basic mhGAP. In a number of countries, such emergencies have actually provided opportunities for systemic change or services reform in public mental health (WHO, 2013c).

Delivering Effective Treatments and Scale-up

Despite the evidence presented earlier, the fact remains that only a small proportion of people suffering from mental disorders receive effective interventions. This failure to provide effective treatments to all people who need them, which has been termed the "treatment gap," is evident in all countries, but is more marked in LMICs. Globally, only one in five people with depression in high-income countries receives minimally adequate treatment; however, the situation is far worse in lower-middle income countries, where only one in 27 people with depression receives minimally adequate care (Thornicroft et al., 2017).

Factors contributing to the treatment gap may be categorized as supply-side barriers and demand-side barriers. The supply-side barriers include lack of trained mental health workers, availability of culturally competent providers to address diverse ethnic and social groups, lack of transportation, and lack of affordable services. As mentioned earlier, there is a severe shortage of specialists in LMICs, where the bulk of the resources available for mental health services are devoted to large psychiatric hospitals and services are concentrated in a few urban settings (WHO, 2014)—this represents a major supply-side barrier in these countries. The demand-side barriers include lack of recognition among the public about mental disorders, lack of awareness that mental disorders can be treated, and stigma that prevents individuals from seeking care.

A challenge to implementing recommended prevention and treatment programs, as described in the DCP-3, is lack of political will—evidenced by less than 1% of the total health budget being allocated to MNS care in most national health systems. Similarly, less than 1% of development assistance goes toward MNS services. Given that 30% of the countries in Africa and 26% of countries in the Americas rank NGOs as the second major funding source for mental health care (WHO, 2015), it is clear that these development funds are stretched incredibly thin. In one out of five countries around the world, households

are the main source of funding for mental health care, mainly through direct out-of-pocket expenses and private health insurance coverage. Governments in Africa and the Americas are more likely to put the financial burden for such care on households. Additionally, health insurance in many countries specifically excludes or greatly restricts reimbursements for mental health care.

Even when government, employer, or private insurance policies do fund mental health care, there may not be *parity* with physical health services—that is, only a limited number of outpatient visits or inpatient treatment days may be covered by insurance. Mental health leaders from the United Kingdom, Canada, Australia, and New Zealand have led efforts to achieve parity in mental health care around the world (Royal College of Psychiatrists, 2012, 2013). In contrast, the United States has traditionally lagged behind other high-income countries, with major disparities being noted in coverage of mental health services compared to physical health: For outpatient services, 77% to 90% of plans place limits on mental health care that are not imposed on physical health care and 66% to 74% limit inpatient MNS services (Thalmayer, Friedman, Azocar, Harwood, & Ettner, 2017). The U.S. Mental Health Parity and Addiction Equity Act of 2008 required parity in insurers' coverage of mental health and physical health. In LMICs, recent national mental health policies in South Africa, India, and Liberia exemplify initiatives to increase government engagement in and support of mental health services.

Lack of financial investment in mental health services is related to high levels of stigma and lack of mental health literacy that lead to low demand from constituents, as well as lack of technical leadership to design and implement MNS treatment programs. Strategies for health-system strengthening include efforts in the following areas:

- To enact WHO's Comprehensive Mental Health Action Plan (WHO, 2013b); to adopt a mainstream rights-based perspective
- To update health policies, plans, and laws to be consistent with international human rights and standards, such as the United Nations' Convention on the Rights of Persons with Disability (UNCPRD)
- To address stigma and enhance mental health literacy to increase demand for care
- To increase advocacy by mental health service users
- To improve MNS services financing through diversion of taxes (alcohol, tobacco, marijuana), promotion of low-cost generic drugs, and de-implementation of harmful or ineffective treatments (e.g., benzodiazepines and vitamins in primary care)
- To include MNS disorders in health management information systems as national indicators

There have been a number of recent initiatives in implementation science to address both the mental health treatment gap and the efficacy–effectiveness gap. The Program for Improving Mental Health Care (PRIME) is integrating mental health services into primary and community care, based on WHO's mhGAP program, in South Africa, Uganda, Ethiopia, India, and Nepal. PRIME's objectives include developing packages of care for integration of mental health services into primary care, based on mhGAP; training primary care workers to deliver mental services; and advancing policy to create sustainable mental health services that can be scaled up from proof-of-concept districts to country-wide services (Lund et al., 2012). Emerging Mental Health Systems in Low- and Middle-Income Settings (EMERALD) is a six-country program (PRIME countries plus Nigeria) that addresses the gap in health systems' ability to scale up packages because of inadequate policy, human resources, funding, and infrastructure. Building on the work of PRIME, EMERALD's objectives include evaluating health-system inputs (e.g., resourcing with WHO's OneHealth tool, fair and sustainable financing), evaluating health-system processes (e.g., policy, legislation, governance, consumer participation), and evaluating health-system outputs (e.g., development, implementation, and monitoring of mental health indicators and performance) (Semrau et al., 2015). Another resource to support best practices in global mental health and advance from research to implementation is the Mental Health Innovation Network (MHIN; www.mhinnovation.net). These initiatives hold promise for addressing the needs of women, men, and children with mental disorders around the world. EXHIBIT 10-5 outlines examples of national scaling-up in three countries across the spectrum of economic development.

Involving a range of sectors is a key aspect of responding to this call to action in all settings, and arguably even more so in LMICs, where formal mental healthcare systems are typically inadequately developed. Intersectoral, community-based action has been used to prevent alcohol and drug abuse and for rehabilitation models for schizophrenia. Another sector that has made important contributions to mental health care and reforms in high-income countries

▶ Global Mental Health: Looking Ahead

Ten years on from the first *The Lancet* series that propelled mental health into the global health spotlight, it is time to consider where the field should head in the next decade. It is evident that, while the existing agenda to improve access to care is still very far from being attained (e.g., treatment gaps remain very large in all countries), this alone is unlikely to lead to a measurable impact not only in reducing the treatment gap but ultimately in reducing the global burden of mental disorders. In this section, we outline research priorities for global mental health to tackle these needs, and then we conclude with an agenda to address key challenges in the field.

Research Priorities in Global Mental Health

Research priorities in global mental health are continuously evolving and reflect national and global policies, funders and their priorities, public attention to health issues, advocacy from human rights and service users' groups, and other trends in national and global health. There have been recent inflection points in the development of global mental health research priorities. Notably, the group of scholars who produced the 2007 *The Lancet* Global Mental Health series conducted a priority-setting exercise to identify the top 10 mental health research questions (Tomlinson et al., 2009). The resulting priority questions were related to health policy and systems research, where and how to deliver existing cost-effective interventions in a low-resource context, and epidemiologic research on the broad categories of child and adolescent mental disorders or those pertaining to alcohol and drug abuse.

A priority-setting activity for the Global Forum identified priorities among researchers and stakeholders in LMICs (Sharan et al., 2009). Priorities included determining the burden of MNS disorders, identification of risk factors, and studying health systems. Prioritized disorders were depression and anxiety, substance use disorders, and psychoses. Prioritized populations were children and adolescents, women, and persons exposed to violence and trauma. Social sciences methods have also been recommended to complement epidemiologic and intervention studies (Kohrt, Mendenhall, & Brown, 2016).

As mentioned at the beginning of the chapter, the Grand Challenges in Global Mental Health (Collins et al., 2011) include a range of research priorities, with an emphasis on implementation science (**TABLE 10-8**). A priority-setting activity was conducted for mental health and psychosocial support research in humanitarian settings (Tol et al., 2011). This exercise yielded key questions to be addressed in global mental health, including identifying stressors faced by populations in humanitarian settings, determining methods to assess mental health in humanitarian settings, documenting how affected populations describe mental health, selecting indicators for monitoring and evaluation, adapting interventions to different sociocultural settings, and determining the effectiveness of family- and school-based preventive interventions.

Emerging research priorities in global mental health include enhancing our understanding of mental health problems through global representation of populations in basic science and neuroscience research (Stein et al., 2015). Because neuroscience models of mental health are dominated by research in WEIRD populations (Henrich, Heine, & Norenzayan, 2010a, 2010b), generalizability of these models to LMIC populations is limited and the progress in understanding the nature of mental health problems has been slow. This is especially problematic when these neuroscience mechanisms are selected as the prioritized targets for intervention before confirmation of similar processes in populations with different child developmental histories, different socioeconomic conditions, and different genetic admixtures (Kirmayer & Gold, 2012a). Nevertheless, potential synergies exist between global mental health and clinical neuroscience research priorities, such as development of reliable criteria for diagnosis of schizophrenia across populations and contexts, understanding responses to trauma and adversity including early-life adversity, understanding resilience across contexts, and development of interventions for nonspecialist providers and preventive measures for resilience promotion (Stein et al., 2015).

As in other areas of global health, there is increasing interest in the application of digital technology and mHealth to increase the delivery, accessibility, and effectiveness of mental health services. In global mental health, digital technologies have been predominantly used in the domains of supporting clinical care and educating health workers, facilitating diagnosis and detection of mental disorders, promoting treatment adherence, and supporting recovery, online self-help, and programs for substance misuse prevention and treatment (Naslund et al., 2017). To date, however, there has been limited research into the effectiveness of these approaches, and data are lacking for both clinical outcomes and cost–benefit analyses of digital technologies compared to traditional approaches. The