21ST CENTURY GLOBAL MENTAL HEALTH

ELIOT SOREL

chapter ten

Mental Health and HIV in Africa

Bibilola Damilola Oladeji, MBBS, MSc, FWACP, and
Oye Gureje, MBBS, PhD, DSc, FRCPsych

CHAPTER OUTLINE

INTRODUCTION

Africa, like most of the developing world, is experiencing rapid demographic and epidemiological transitions.[1] Life expectancy at birth in Africa is increasing rapidly and is expected to dramatically increase the number of elderly people on the continent.[2] It is projected that the population of people more than 65 years old in sub-Saharan Africa will increase by about 80% between 2000 and 2020.[3] This aging of the population will have a significant impact on the prevalence and burden of mental health problems. The pattern of disease is also rapidly changing with a significant reduction in the levels of communicable disease and an increase in noncommunicable disease conditions, including mental health and substance use disorders.[4] In sub-Saharan Africa, these problems are further compounded by poverty, ethnic strife, rapid urbanization, and the growing HIV/AIDS epidemic.[5]

The World Health Organization (WHO) reports that of the 30.3 million people worldwide living with HIV/AIDS in 2009, 22.5 million were in sub-Saharan Africa.[6] HIV was the leading cause of disability in this region in 2001.[4] The high burden associated with HIV is contributing significantly to the low life expectancy in sub-Saharan Africa. However, recent advances in the treatment of HIV-infected individuals has led to an increase in the life expectancy of people living with HIV, turned HIV into a chronic condition, and increased the likelihood of neuropsychiatric manifestations of the disease.[7] Studies have shown that up to half of people infected with HIV have a comorbid psychiatric disorder.[8]

EPIDEMIOLOGY OF MENTAL DISORDERS

Mental health disorders are universal (they occur in all cultures and races and in all age groups) and are quite common. Worldwide, 450 million people are estimated to be affected by mental, neurological, and behavioral disorders.[9] Prevalence estimates of mental disorders are known to vary depending on the population studied and the ascertainment and diagnostic procedures used. However, up to 25% of people worldwide will develop at least one mental disorder in their lifetimes.

Epidemiologic data on mental disorders are still relatively scarce in Africa and literally nonexistent in many countries across the continent. Reported rates of mental disorders may also not be comparable across studies because different authors have used different diagnostic instruments and case definitions for mental disorders. Nevertheless, results from the few available studies suggest that mental disorders are as highly prevalent in Africa as they are in other parts of the world. It may of course be the case that there are cultural differences in the form in which disorders manifest and that social and cultural differences may affect outcomes. For example, one of the earliest cross-cultural studies ever conducted, the International Pilot Study on Schizophrenia, suggested that patients from developing countries had a more favorable short- and medium-term outcome of the disease compared to those from developed countries.[10,11] However, earlier claims that some conditions were either not present or were so different in their presentations in Africans as to question their equivalent identity with similar conditions in Western Europe or North America now seem substantially repudiated.[12-17]

In patients attending primary health care facilities across Africa, reported prevalence rates for mental disorders range from 14.4 to 27.8%.[18-21] The most common disorders seen in primary care include affective disorders, especially

depression, anxiety disorders, somatoform disorders, and psychotic disorders. Despite the high rates of mental disorders presenting in primary care, the level of recognition is generally low among primary care practitioners, thus implying that a majority of patients in need of treatment are not receiving any. In the World Health Organization's study of mental disorders in primary care, primary care physicians were able to correctly identify about only half of the cases diagnosed by the research interview.

The development of standardized diagnostic assessment schedules in the past few decades has allowed the conduct of community epidemiologic surveys of mental disorders that generate comparable data across studies and locations. The rest of this section will be devoted to discussing some of what is currently known about the epidemiology of common mental disorders in Africa.

Anxiety Disorders

Anxiety disorders are the most common group of mental disorders in the community. Phobic anxiety disorders are often the most prevalent, followed by generalized anxiety disorder. In Nigeria, Gureje et al.[22] reported a lifetime prevalence of 5.7% and a one-year prevalence of 4.1% for DSM-IV anxiety disorders. Specific phobia was the most common anxiety disorder, diagnosed in 5.4% of the study population. In South Africa, lifetime prevalence of DSM-IV anxiety disorders was 15.8%, with the most common disorder being agoraphobia without panic disorder, reported in 9.8% of the population.[23] In rural communities in Ethiopia, Awas et al.[24] found anxiety disorders in 5.7% of the population.

Studies in primary care clinic populations report a prevalence of up to 36% for anxiety disorders.[18] The most common anxiety disorders reported in primary care include generalized anxiety disorder, panic disorder, and mixed anxiety and depression.[25,26]

Anxiety disorders are more common in females,[27] usually have their onset in adolescence and young adulthood, and tend to be chronic.[28,29] They are often comorbid with other psychiatric or physical disorders.[30-32]

Mood Disorders

Mood disorders, in particular major depressive disorder, are also highly prevalent in the general population. Major depression is diagnosed between 9 and 25% of primary care clinic attendees across Africa.[18,26,33,34] In community surveys, the lifetime prevalence rates for major depressive disorder range from 2.9 to 9.7%.[22,35,36] The incidence rate for major depression was

reported to be 15.6% in a rural general practice in South Africa[37] and 18% for women in Harare, Zimbabwe.[38]

Similar to what has been reported in other parts of the world, depression is more common in women.[27] The age of onset is usually between 29 and 43 years.[23,29] Depression is associated with significant comorbidity and elevated risk of suicidal behavior.[32] Reported risk factors for depressive disorders include life events, childhood adversity, poverty, increasing age, and low socioeconomic status.[39-41]

Bipolar affective disorders are less common, with a prevalence of 0.3 to 1.83% in the community.[35,42] The mean age of onset for bipolar disorders is about 22 years.[42,43] Persistent mood disorders occur in 0.2 to 1.6% of the general population.[22,35,36]

Trauma-Related Disorders

The World Health Organization reports that the rates of violence and injury in the African region are among the highest in the world. Based on 2002 estimates, six of the top 15 causes of death for Africans aged 15–44 years resulted from injuries: homicides, road traffic injuries, war-related injuries, drownings, suicides, and poisonings. Sub-Saharan Africa has the highest rates of death from war-related injuries in the world. Exposure to these traumatic events is associated with a variety of mental health and social problems.

Community surveys from different parts of the world reveal that up to 30% of the general population may have experienced at least one traumatic event in their lifetimes.[44] Commonly reported traumatic events in primary care and general population studies include violence, accidents, death of a loved one, war, and natural disasters.[44,45] Men report more traumatic events compared to women.[45]

Lifetime prevalence estimates of PTSD in the general population range between 2 and 5%. Estimates are much higher following exposure to traumatic events. For example, in people exposed to war, prevalence rates of PTSD are between 20 and 40%.[46-48] Rates of PTSD increase with proximity to the event and with increasing number of traumatic events.[47,49]

Psychotic Disorders

In many African countries, psychotic disorders often present as acute episodes, sometimes resulting from cerebral involvement of infectious diseases such as typhoid fever, malaria, and HIV infection.[15,50] The first valid cross-cultural data on the profile of psychotic symptoms and the prevalence of schizophrenia across the world were provided by the International Pilot Study

of Schizophrenia. This study demonstrated that schizophrenia is found in all cultures and the prevalence is similar when assessed in comparable ways. Worldwide, the prevalence of schizophrenia is about 1%. It occurs equally in men and women. The age of onset is usually in late adolescence or young adulthood; however, there is a strong gender effect, with men developing the illness earlier than women.

There have been few other epidemiologic studies of psychotic disorders in Africa. In a rural area of Ethiopia, Kebede et al. reported a lifetime rate of schizophrenia of 4.7 per 1000 and a high male-to-female ratio.[51,52]

Childhood Mental Disorders

Africa currently has the youngest population in the world; up to 50% of the total population in Africa is children and adolescents. Worldwide, 10 to 20% of children and adolescents have a current serious mental disorder.[9] These disorders include childhood disorders such as attention-deficit/hyperactivity disorder and autistic disorders as well as adult disorders with onset in childhood. It has been reported that up to 50% of adult psychiatric disorders begin in childhood and adolescence. Early onset of mental disorders is often a predictor of poor outcome, chronicity, and increased burden. In Africa, many children are affected by wars, civil conflicts, displacement, malnutrition, poverty, and AIDS. This leaves many of them orphaned and vulnerable to increased risk for abuse and mental health problems.

Large-scale data on community prevalence rates and patterns of mental disorders in children and adolescents are rare in Africa; however, available evidence suggests that the rates are similar to those in other parts of the world.[53,54] In Nigeria, Gureje et al.,[55] in a pediatric primary care setting, reported an overall prevalence of disorders in 19.6% of attendees, and Adelekan et al.[56] reported a rate of 18.6% in an elementary school sample. Tadesse et al.,[57] in a district in Ethiopia, found an overall rate of 17.7% for childhood behavioral disorders, and the rates increased with increasing age. Commonly reported disorders include depression, anxiety disorders, and conduct disorders. Childhood behavioral disorders are more common in boys than in girls.[55-57]

The HIV/AIDS epidemic in Africa is taking its toll on the mental health and well-being of Africa's children. The epidemic has contributed to rising child mortality and has rendered many children orphaned or vulnerable.[58] A large number of children live at high risk of HIV, and some are saddled with the responsibility of caring for a chronically ill parent or parents and are subject to stigma and discrimination because of their HIV status or association with a person living with HIV.[58,59] Some children might be

required to work or put their education on hold, and their households may experience greater poverty because of the disease. All these adverse childhood experiences place these children at increased risk for developing mental health problems.

Mental Disorders of the Elderly

The world's population is rapidly aging, and this demographic transition is occurring at a faster rate in developing countries. It is projected that the population of people more than 65 years old in sub-Saharan Africa will increase by about 80% between 2000 and 2020.[3] The prevalence rates of many physical and mental disorders are known to increase with increasing age.[60,61] Close to 60% of elderly populations more than 65 years old are diagnosed with at least one chronic medical disorder. The most common disorders diagnosed in elderly populations include cardiovascular diseases, especially hypertension; hearing and visual impairment; and osteoarthritis.[61-63] These disorders are often comorbid and associated with the presence of mental disorders, especially depression.[63]

The rates of depression in the elderly populations are higher than the rates reported from general populations in those regions. For example, in Nigeria, the rate of depression in the general adult population is about 3%, whereas in the elderly 65 years or older, using similar modes of ascertainment, the prevalence is 7.1%.[22,64] In South Africa, reported prevalence of depression in the general population is about 10%, while in the elderly it is between 13 and 16.5%.[36,65]

Even though the current rates of dementing illnesses are low in Africa and other parts of the developing world, they are expected to increase in tandem with the aging population.[66] Community prevalence estimates for dementia range between 2 and 6%.[66] Similar to the results of studies from more industrialized nations, Alzheimer's is found to be the most common type of dementia, occurring in about 60% of dementia cases, followed by vascular dementia. Interestingly, the ε4 allele of the apolipoprotein E gene has not been found to be a risk factor for dementia in Africans.[67,68]

In many African countries, the facilities and resources to cater to the health needs of the elderly are not widely available, and the burden of care rests on family members. With the rapid rates of urbanization and breakdown in the extended family system currently being witnessed in most African countries, it is going to become increasingly difficult for elderly people requiring assistance to get any. A recent study revealed that up to 19% of elderly people with disability requiring assistance in activities of daily living

had no caregiver to provide the needed help.[69] Furthermore, the majority of the elderly reside and work in rural areas where health and social services are less well developed than in the urban centers.

The HIV/AIDS epidemic is also taking its toll on the elderly populations in Africa. As the epidemic affects more adults in their economically productive years, many elderly will lose their economic and social support with the death of their adult children. In addition, these elderly people acquire the additional burden of caring for young children orphaned by AIDS. Kautz et al.,[70] using data from the National Demographic and Health surveys from 22 African countries, found that the number of elderly people living alone and being the sole caregiver for young children increased with increasing severity of the HIV/AIDS epidemic.

BURDEN OF MENTAL DISORDERS

Prior to the Global Burden of Diseases study, the burden of disability associated with mental disorders was not appreciated, and mental health was not accorded much public health significance. Mental disorders are now recognized to be a significant cause of role impairment in work and social relationships and poor quality of life and physical well-being. In the WHO 2004 Global Burden of Disease report,[71] neuropsychiatric conditions accounted for up to 31.7% of all years lived with disability (YLD). The burden associated with mental disorders is comparable to that for cardiovascular and respiratory disorders and exceeds that associated with cancers and HIV.[72] The excess burden attributable to mental disorders results from their high prevalence rates, relatively early age of onset, and prolonged course.

Even though communicable, maternal, perinatal, and nutritional disorders continue to constitute the greatest disease burden in much of Africa and other low-income countries, noncommunicable diseases are increasing in significance. Up to 45% of the disease burden in low- and middle-income countries is now from noncommunicable diseases. In the WHO report for 2005, neuropsychiatric disorders accounted for about 9.1% of the total disability adjusted life years (DALYs) and more than 25% of the DALYs due to noncommunicable disease. It is expected that the contributions of neuropsychiatric and other noncommunicable disease to overall disease burden in Africa will continue to rise as health systems improve and achieve greater success in treating communicable diseases and improve perinatal care. It is projected that by 2030, the burden associated with neuropsychiatric disorders globally will increase from the current 9% to about 11% of total DALYs and that of other noncommunicable diseases will increase from 35 to 45%.[73]

The mental disorders associated with the largest disease burden include unipolar and bipolar affective disorders, alcohol and substance use disorders, anxiety disorders, schizophrenia, and dementia. Unipolar depression is the leading cause of YLD globally, accounting for 13.4% and 8.3% of the total YLD for males and females, respectively, in the 2004 Global Burden of Disease study.[71] Unipolar depression was ranked as the seventh leading cause of disability for low- and middle-income countries in 2001; it is projected to become the second leading cause by 2030.[4,73] Unipolar depressive disorder accounts for so much disability globally because of its high prevalence (lifetime occurrence in the general population is close to 20%) and chronic course. In addition, recent evidence suggests that even subthreshold depressive symptoms that do not attain diagnostic status are associated with considerable levels of disability and level of disability increases stepwise with increment in depressive symptoms.

Schizophrenia, along with schizoaffective disorder, constitutes the fifth leading cause of disability worldwide and is responsible for more years of life lived with disability than all malignancies and HIV combined. Typically, schizophrenia has an early age of onset (usually in late adolescence and early adulthood), often making it difficult for people with this disorder to attain their full potential in terms of educational attainment, establishment of a career, and marital relationships. The disorder also persists for most of the individual's lifetime. Bipolar disorder, even though characterized by remissions and relapses, is associated with a significant level of disability that is not only limited to episodes of the illness but persists even during periods of remission. It accounted for 2.5% of global YLD in the 2000 Global Burden Disease study.

Other common mental disorders, especially the anxiety disorders (generalized anxiety disorder, panic disorder, phobic anxiety disorders, obsessive-compulsive disorder, and posttraumatic stress disorder), also cause substantial levels of disability. These disorders often co-occur with other mental and physical disorders. The presence of comorbidity is associated with higher levels of disability.

The effect of mental disorders on role functioning is commonly broad. Even though the most common focus of impairment is in the domains of occupation, marriage, parenting, and social relationships, an awareness now exists that mental disorders impair the performance of activities of daily living (such as the ability to maintain personal hygiene) as well as instrumental activities of daily living (such as shopping and doing physical chores). Thus, mental disorder may limit performance of roles relating to mobility, as well as cognition, and may also reduce the capacity of affected individuals for personal self-care. The demonstration that mental disorders may affect not only

psychosocial functioning but also limit physical functioning has important implications for the understanding of the totality of the impact of mental disorders, especially in contrasting such disorders with common chronic physical conditions such as arthritis, heart diseases, and respiratory conditions. Data from the World Mental Health Surveys show that common mental disorders are more disabling than common chronic medical conditions.[74]

In addition to the health burden associated with mental disorders highlighted above, mental disorders also impose additional costs on the individuals, families, and society at large. Individuals with mental health problems have impaired quality of life and lost productivity, as well as have to deal with the impact of stigma and discrimination. Stigma limits the opportunities for work, leads to exclusion, denies people with mental disorders opportunity for full recovery, and perpetuates the associated disability.

It is estimated that one out of every four families has a mentally ill member.[9] Such families have to cope with the emotional stress of providing support and care for a mentally ill member. In most African countries, considerable burden falls on caregivers. This burden results not only from traditional close family bonds but also from lack of mental health and social welfare services. In places where mental health services are available, payment for such services is usually out of pocket because insurance is unavailable or mental disorders are not covered by insurance. Families also have to provide ongoing supervision and help with activities of daily living and emotional support. This caring role takes up a substantial portion of the carers' time, resulting in lost earnings, lost opportunities for social interactions and leisure, and psychological distress.

Stigma, Quality of Life, and Mental Disorders

Experience of stigma and discrimination is rife for people with mental illness and may be an important reason for impaired quality of life. Stigma can be defined as a mark of shame, disgrace, or disapproval that results in an individual being rejected, discriminated against, and excluded from participating in a number of areas of society. Recent research evidence has challenged earlier claims that stigmatizing attitudes toward the mentally ill are less evident in non-Western cultures.[75-77] Stigma commonly arises from poor knowledge about the nature, causes, treatment, and treatment outcomes of mental illness, resulting in negative views of the mentally ill. In many African communities, negative attitudes toward the mentally ill stem from deep-seated beliefs in the supernatural causation of mental illness and prejudice that people who develop mental illness in some way deserve their lot.

Stigma constitutes the most important barrier to seeking treatment for mental illness, the type of treatment received, and funding available for mental health care.[78] People with mental disorders commonly rate their quality of life lower than those with no mental disorders. Assessment of quality of life provides an indication of the impact of disorders on the subjective well-being of a person across a whole range of areas. In people with mental disorders, multiple domains are often affected. Thus, poorer self-reported well-being in physical, social, environmental, and psychological domains may be reported.

Mortality in Mental Disorders

Mental disorders have been associated with premature mortality attributable to both natural (deaths resulting from somatic diseases) and unnatural (deaths due to accidents and suicide) causes. Standardized mortality ratios for both natural and unnatural causes of death in psychiatric patients are more than twice that of the general population. Mental disorders that have been associated with increased risk of death include schizophrenia, dementia, major affective disorders, and substance use disorders. The leading causes of death in patients with mental disorders include cardiovascular diseases, suicides, accidents, respiratory diseases, infections, and malignancies.

This excess in mortality in patients with mental illness can be accounted for in part by the increased frequency of death from suicides and accidents. Accidental deaths have been linked to substance use disorders, especially alcohol use; depressive disorders; anxiety disorders; adjustment disorders; and personality disorders. Accidental deaths are more common in men than in women and are significantly increased in the presence of comorbidities.

Even though reliable data are scarce from Africa, it is known that the majority of suicides occur in low- and middle-income countries. The lifetime risk of suicide in patients with mood disorders is about 30 times that of the general population. Overall cross-national prevalence estimates for suicidal ideation, plans, and attempts in the World Mental Health Surveys were 9.2, 3.1, and 2.7%, respectively.[79] Rates of suicidal behavior do not mirror the geographic patterns associated with suicide deaths and show no systematic difference between developed and developing countries. Prior suicidal behaviors are among the strongest predictors for subsequent suicidal behaviors.[80]

The highest risk for suicide and suicidal behavior is seen in people with mood disorders, especially depression; impulse control disorders; alcohol/substance use disorders; and psychotic and personality disorders.[81]

INTERVENTIONS FOR MENTAL DISORDERS

Effective treatment strategies exist for most of the common mental disorders; however, resources and availability limit the form of treatment provided. The treatment gap for mental disorders in many low- and middle-income countries is more than 75%.

Psychiatric Services in Africa

Psychiatric services are poorly developed across the continent, with most of the available services and personnel located in urban areas. Much of modern psychiatric service is still offered in stand-alone psychiatric hospitals, many of which were established during the colonial administrations. For example, the first asylum, established in Calabar, Nigeria, in 1904, is still in use today. The same is true of Mathari Hospital, in Nairobi, Kenya, established in 1910. In many countries on the continent, the great proportion of available psychiatric beds are located in such hospitals. To varying degrees, service provided by mental hospitals is complemented by psychiatry units of teaching and general hospitals and, in countries such as Kenya, by provincial or general hospitals. In South Africa, public psychiatric services provide care for about 80% of the patients, and private practice psychiatry cares for the remaining approximately 20% who can afford it.[82]

Overall, Africa has a median of 0.7 psychiatric beds in general hospitals per 100,000 population compared to 10.5 in Europe.[83] Human resources for mental health service are also in short supply and inequitably distributed. Within countries, most mental health professionals are located in cities; for example, 44 of Kenya's 53 psychiatrists practice in urban areas,[84] many of them in Nairobi.

In general, most African countries are yet to have a fully mainstreamed mental health service in which patients with mental disorders are treated in the same facility as those with physical illness. In addition, effective community service is yet to be fully developed in Africa. There are however some small-scale programs that could provide models for effective integration of mental health service into primary care, as has been shown in Guinea-Bissau[85] and for comprehensive culturally applicable rehabilitation for persons with severe mental illness, as demonstrated in Tanzania.[86]

Currently, the majority of people in need of mental health services are not receiving any.[87] As highlighted above, the major challenges to the delivery of mental health care in Africa include scarce human and financial resources, inequities in the distribution of the available facilities and resources, and a lack of awareness of the magnitude of the burden associated with mental

health problems. Tackling these barriers will require increasing advocacy efforts and the integration of mental health services into the existing health service structures of different nations, providing ongoing training and supervision to primary care practitioners, and mobilizing resources for mental health from various sectors.

Collaborations with Primary Care and Indigenous Healers

Across Africa, mental health specialists are scarce (see section on health workforce and training); therefore, the only way to reduce the treatment gap for mental disorders is to train primary health care and community health workers in the identification, management, and referral of mental disorders and to establish effective collaborations with specialists.[88] At present in most countries, primary health care workers have very poor knowledge of mental disorders and a negative attitude toward mental health; therefore, virtually no mental health services are provided at primary health care facilities.[89]

To achieve effective delivery of mental health care in primary care settings, appropriate training needs to be combined with continued supervision and support for primary care workers.[90] Studies have shown that detection of mental disorders by primary care workers is improved by their working closely with psychiatrists.[91] Scaling up mental health care in Africa might be better achieved by redeploying the few available psychiatrists to provide training for primary care practitioners. It will also be important to strengthen psychiatric training in undergraduate medical curricula to produce general physicians who will be more confident and competent to provide care for common mental disorders in general health settings and provide supervision for other staff.

In many African countries, a large number of people still rely on traditional and religious healers to help meet their primary health care needs.[92] With the widespread beliefs in the supernatural causation of mental disorders across the continent, many individuals and families with mentally ill members seek care from traditional healers and religious healers.[89] For example, a study in urban Tanzania found that among people attending a traditional healer center in Dar es Salaam, the prevalence of common mental disorders was 48%, which was twice the prevalence among persons attending the neighboring primary health care clinic.[93] In a national survey on the use of alternative care for mental disorders in South Africa, Sorsdahl et al.[93] reported that 20% of individuals with a lifetime mental disorder obtained treatment from traditional healers (9%) and religious or spiritual advisors (11%). Factors that are associated with seeking alternative practitioners include presence of a psychotic, substance use, or anxiety disorders;

accessibility and affordability of alternative healers; older age; race; unemployment; and lower education.[94,95]

Despite the widespread patronage of alternative forms of care, there is as yet very little empirical data to support the effectiveness of most traditional and religious treatment modalities for mental disorders. In addition, the practices of alternative practitioners in most countries are not regulated. Given the large numbers of mentally ill people being attended to by these alternative healers, finding ways to incorporate them into orthodox mental health services might be important in increasing mental health care. Similarly, collaborations between these alternative practitioners and mental health professionals will be needed to improve the quality of care being delivered by these practitioners.

Mental Health Policy in Africa

One major barrier to the provision of effective mental health services in Africa is the lack of mental health policies, programs, and action plans. Globally, 60% of countries have a dedicated mental health policy covering approximately 72% of the world's population. Only 42.2% of African countries have a mental health policy, and many countries with an existing policy document do not have an action plan for its implementation. Failure to implement implies that the benefits of the policy may not reach the intended populations.

In Nigeria, for example, the national mental health policy document was formulated in 1991; the policy makes provision for incorporating mental health into the national health care system at all levels and proposes an increase in service coverage for mental health care by introducing mental health as the ninth component of the nation's primary health care services. It also includes a selection of psychotropic medications in the essential drug list.[96] Two decades later, the policy has yet to be fully implemented and has not had much effect in improving the provision of mental health care. The reasons for this include lack of training and supervision for primary health care workers, failure to develop secondary mental health care services and to effectively link primary care providers with mental health specialists, non-availability of psychotropic medications at the primary care level, and poor funding.[97]

Financing of Services

Close to 40% of African countries do not have a separate mental health budget within the total health budget. Even in countries with specified mental health expenditures, close to 70% spend less than 1% of their health budget on mental health. Methods for financing mental health care in Africa include

out-of-pocket payments (38.6%), tax-based funding (54.5%), private insurance (4.5%), and external grants (2.3%).[71]

Health Workforce and Training

The median number of psychiatrists per 100,000 people in African countries is 0.05, translating to roughly one psychiatrist to 2 million people.[83] Within the continent, the distribution of human resources is uneven, with countries in sub-Saharan Africa having significantly fewer resources than those in North and South Africa. For instance, Ethiopia, the second most populous country in Africa, has only 11 psychiatrists, a ratio of one psychiatrist to about 6 million people,[98] and, in South Africa, the ratio is one psychiatrist to 250,000 people. Chad, Eritrea, and Liberia have one psychiatrist each to their populations of 9, 4.2, and 3.5 million, respectively. On the other hand, Egypt has about 0.9 psychiatrists to a population of 100,000.

The numbers for other mental health professionals are similarly low: 0.61 psychiatric nurses, 0.04 psychologists, and 0.03 social workers per 100,000 people in Africa.[83] Many factors are responsible for the shortages of trained professionals in mental health care. Training facilities for mental health professionals in Africa are not enough to produce the desired numbers of professionals. The scarcity of professionals is further compounded by their migration to developed countries because of better working conditions.

Models for psychiatric training vary across Africa. In South Africa, for example, there are two routes to qualify and register as a psychiatrist. One is by undertaking a master's degree in psychiatry—MMed (Psych)—and the other is to complete a fellowship program of the College of Psychiatrists of The Colleges of Medicine of South Africa—FC Psych (SA).[82] In Nigeria, on the other hand, psychiatry training, like all other postgraduate medical training, is modeled after that of the United Kingdom's The Royal College of Psychiatrists. Psychiatrists are registered after completing a four- to six-year residency training program and passing the fellowship qualifying examinations of either the West African College of Physicians—FWACP—or the National Postgraduate Medical Training College of Nigeria—FNMC (Psych).

HIV/AIDS IN AFRICA

Even though the global rates of new HIV infection and HIV-related deaths is on the decline, sub-Saharan Africa remains seriously affected by the epidemic. The WHO global AIDS report of 2010 states that 68% of the global total number of people living with HIV/AIDS in 2009 currently reside in sub-Saharan Africa and 72% of the global total of 1.8 million deaths attributable to HIV

occurred in the same region.[6] HIV is currently the leading cause of death in Africa. Countries with the largest burden of HIV in the region include Ethiopia, Nigeria, South Africa, Zambia, and Zimbabwe. Women in Africa bear a disproportionate portion of the AIDS burden. Not only are there more women than men living with the disease, in most countries, they are also more likely to be the ones caring for people infected with HIV. Female-to-male ratios of new HIV infections range from 1.22:1 in West and East Africa to 1.33:1 in southern Africa.[6]

There has been a significant scaling up of treatment for HIV globally. In sub-Saharan Africa, by the end of 2009, 37% of people eligible for treatment were able to access highly active antiretroviral therapy compared to only 2% in 2002.[99] It is expected that, as HIV testing expands, access to treatment will be further improved and health systems strengthened to monitor the health status of people living with HIV and that AIDS-related mortality is likely to further reduce. This reduction in mortality and increased life expectancy of people living with HIV/AIDS is turning HIV infection into a chronic infectious disease and increasing the number of people living with HIV/AIDS. This increase in the number of people living with HIV will place added burden on the health systems of many African countries.

The HIV/AIDS epidemic is also contributing to the changing demographic and household structures in sub-Saharan Africa. It has contributed to rising child mortality and reductions in life expectancy in the region, resulting in many children becoming orphaned or vulnerable.[59,100] Almost 90% the total of 16.6 million children 0–17 years old who have lost their parents due to HIV live in sub-Saharan Africa.[6] AIDS-related mortality has led to increases in the number of single-parent-headed (in which a female is usually the single parent), child-headed, and grandparent-headed households.[59,101]

Despite this huge burden of HIV/AIDS in Africa, very little of what is currently known about the epidemic comes from Africa. As pointed out by Ogunbodede,[102] only 4.7% of the 140,736 publications on HIV/AIDS between 1981 and 2000 are directly related to Africa. A need exists for more empirical data to drive policy and provision of care for people living with HIV/AIDS in Africa because differences in sociocultural and other factors make generalization of reports from more developed economies inappropriate.

Mental Health Aspects of HIV/AIDS

Infection with HIV has been consistently linked with poor mental health. The rates of mental disorders in HIV-infected populations are in excess of that found in the general adult population. In a case-control study, Adewuya et al.[103] reported a rate of 59.1% for psychiatric disorders compared to 19.5%

in subjects without HIV. In South Africa, prevalence of psychiatric disorders in HIV-infected populations range from 43 to 56% compared to about 30% in the general adult population.[23,104-106] In some patients, especially in resource-poor settings, psychiatric disorders are the initial presenting clinical manifestation of HIV disease.

Evidence also exists of high HIV seroprevalence in people with serious chronic mental illnesses. In South Africa, Collins et al.[107] found a seroprevalence rate of 26.5% in patients admitted to a public psychiatric hospital, and in Uganda, Maling et al.[108] reported a rate of 18.4% among first-time psychiatric admissions in two national referral hospitals.

Several mechanisms have been implicated in this complex relationship between HIV and mental health. HIV is known to directly infect the central nervous system, leading to neuropsychiatric complications such as minor cognitive and motor disorder, HIV-associated dementia, and mood disorders. The high prevalence of psychiatric disorders reported in people living with HIV may actually reflect high rates of preexisting mental and substance use disorders in demographic groups at increased risk for HIV.[109] On the other hand, emotional distress, depression, and anxiety may be a response to the initial crisis of learning about HIV status or to the subsequent development of symptoms and associated disability or may be related to the unwanted effects of antiretroviral therapy.[110,111]

Factors that have been associated with increased likelihood of having a psychiatric disorder include the number of HIV-related symptoms, viral load, younger age, heavy alcohol use, unemployment, and living alone.

Psychiatric Disorders in HIV/AIDS

As noted above, psychiatric disorders are more prevalent in HIV infected populations compared to general adult populations. The comorbidity of HIV and psychiatric disorders is associated with reduced adherence to antiretroviral treatment, increased use of health services, impaired quality of life and poorer health outcomes.[113] Psychiatric disorders that are commonly reported among HIV infected populations include mood disorders, anxiety disorders (especially PTSD), and psychotic disorders. Early recognition and treatment of comorbid mental disorders in patients with HIV improves quality of life and treatment outcomes.[114]

Mood Disorders

Depression is usually the most prevalent psychiatric diagnosis among HIV-infected patients; a two- to seven-times increased likelihood exists for a

diagnosis of depression in patients with HIV compared to the general population.[111] The prevalence rate ranges between 3 and 35% in African studies.[105,112,113,115] The rates reportedly increase with clinical stage, or progression, of the HIV disease.[106,112] The diagnosis of depression is sometimes difficult in patients with HIV due to the overlap in some symptoms, for example, fatigue, pain, anorexia, and insomnia.[7]

Depression in HIV/AIDS is associated with poor adherence to antiretroviral therapy, reduced quality of life, and increased mortality.[116,117] Poor adherence to highly active antiretroviral therapy (HAART) has been linked to poor outcomes, including increased viral load, viral resistance, clinical progression to AIDS, opportunistic infections, and increased hospital admissions. Early detection and appropriate interventions for depression will be important in efforts to achieve optimal adherence to HAART.

Rates of manic illness are increased in people with HIV/AIDS, especially with progression of symptoms. Mania in patients with AIDS is related to cognitive impairment and immunosuppression (indicated by low CD4 cell counts) and is thought to result from direct central nervous system infection by HIV.[118]

Anxiety Disorders

The prevalence rates of anxiety disorders are commonly elevated in patients with HIV infection and are often comorbid with depression. Anxiety syndromes typically manifest as PTSD, generalized anxiety disorder, mixed anxiety, and depression and phobias. PTSD has been documented in up to 20% of patients and is associated with a greater number of life events.[105]

Psychosis

Very few studies exist that have investigated the occurrence of psychotic symptoms in HIV/AIDS in Africa. Few available studies suggest that the pattern of occurrence is similar to that in other settings. Psychosis is a relatively uncommon psychiatric manifestation of HIV and appears more often in later stages of the disease.[119] Psychosis in HIV-infected populations is associated with untreated HIV infection, cognitive impairment, HIV-associated dementia, and a past history of psychiatric or substance use disorders.[111]

Despite the well-established relationship between mental health and HIV/AIDS and the WHO's recommendation that attention to the psychosocial needs (which include prevention and treatment of mental health problems) of people with AIDS should be an integral part of HIV care, mental health care is yet to be integrated into HIV treatment programs in many African and other

resource-poor countries.[120] Considering the fact that mental health resources and professionals are lacking across Africa, effective delivery of mental health care to people with mental illness can be achieved only by strengthening the capacity of those working within HIV prevention and treatment programs to recognize and treat mental health problems.

A need also exists for well-designed studies to increase the evidence base of the interactions between mental illness and HIV/AIDS at various stages of the disease in Africa and other resource-poor settings, where the disease is most prevalent. It is also important to increase awareness that mental health constitutes a major barrier to reducing the spread of HIV infection–preventive efforts, including the uptake of counseling and testing services and adoption of low-risk behaviors, adherence to HAART, and ultimately survival.[121] This can be achieved only when empirical evidence from locally conducted research becomes available to guide the formulation of effective policy and intervention strategies.

REFERENCES

1. Manton KG, Stallard E, et al. Changes in the age dependence of mortality and disability: cohort and other determinants. Demography. 1997;34:135-157.
2. World Health Organization. Social development and ageing: crisis or opportunity? Geneva, Switzerland: World Health Organization; 2000.
3. WHO/AGEING. Health Topics—Ageing. http://www.who.int/topics/ageing/en.
4. Lopez AD, Mathers CD, et al. Global and regional burden of disease and risk factors, 2001: systematic analysis of population health data. Lancet. 2006;367(9524):1747-57.
5. Okasha, A. Mental health in Africa: the role of the WPA. World Psychiatry. 2002;1:32-5.
6. Joint United Nations Programme on HIV/AIDS (UNAIDS). Global report: UNAIDS report on the global AIDS epidemic 2010. Geneva, Switzerland; 2010.
7. Dube B, Benton T, et al. Neuropsychiatric manifestations of HIV infection and AIDS. J Psychiatr Neurosci. 2005;30:237-46.
8. Bing EG, Burnam MA, et al. Psychiatric disorders and drug use among human immunodeficiency virus-infected adults in the United States. Arch Gen Psychiat. 2001;58(8):721-8.
9. World Health Organization. World health report: new understanding, new hope. Geneva, Switzerland: World Health Organization; 2001.
10. Lin KM, Kleinman AM. Psychopathology and clinical course of schizophrenia: a cross-cultural perspective. Schizophr Bull. 1988;14(4):555-67.
11. Leff J, Sartorius N, et al. The International Pilot Study of Schizophrenia: five-year follow-up findings. Psychol Med. 1992;22:131-45.
12. Prince R. The changing picture of depressive syndromes in Africa: is it fact or diagnostic fashion? Can J Afr Stud. 1967;1:177-92.
13. Binitie A. The clinical manifestations of depression in Africans. Psychpathologie Africaine. 1981;17:36-40.
14. Majodina MZ, Johnson FY. Standardized assessment of depressive disorders (SADD) in Ghana. Br J Psychiat. 1983;143:442-6.
15. Odejide AO, Oyewunmi LK, et al. Psychiatry in Africa: an overview. Am J Psychiat. 198;146:708-16.
16. Patel V, Winston M. The universality of mental disorder revisited: assumptions, artefacts and new directions. Br J Psychiat. 1994;165:437-40.

17. Gureje O. Psychiatry in Africa: the myths, the exotic and the realities. S Afr Psychiat Rev. 2007;10:11-14.
18. Abiodun OA. A study of mental morbidity among primary care patients in Nigeria. Compr Psychiatry. 1993;34:10-13.
19. Thom RGM, Zwi RM, et al. The prevalence of psychiatric disorders at a primary care clinic in Soweto, Johannesburg. S Afr Med J. 1993;83:653-5.
20. Gureje O. Psychological disorders and symptoms in primary care: Association with disability and service use after 12 months. Social Psychiatry and Psychiatric Epidemiology 2002;37:220-224.
21. Ngoma MC, Prince M, et al. Common mental disorders among those attending primary health clinics and traditional healers in urban Tanzania. Br J Psychiatry. 2003;183(4): 349-55.
22. Gureje O, Lasebikan VO, et al. Lifetime and 12-month prevalence of mental disorders in the Nigerian Survey of Mental Health and Well-Being. Br J Psychiatry. 2006;188:465-71.
23. Stein DJ, Seedat S, et al. Lifetime prevalence of psychiatric disorders in South Africa. Br J Psychiatry. 2008;192(2):112-7.
24. Awas M, Kebede D, et al. Major mental disorders in Butajira, southern Ethiopia. Acta Psychiatr Scand Suppl. 1999;397:56-64.
25. Gureje O, Obikoya B, et al. Prevalence of specific psychiatric disorders in an urban primary care setting. East Afr Med J. 1992;69(5):282-7.
26. Hollifield M, Katon W, et al. Anxiety and depression in an outpatient clinic in Lesotho, Africa. Int J Psychiatry Med. 1994;24:179-88.
27. Seedat S, Scott KM, et al. Cross-national associations between gender and mental disorders in the World Health Organization World Mental Health Surveys. Arch Gen Psychiatry. 2009;66(7):785-95.
28. Kessler RC, Angermeyer MC, et al. Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Initiative. World Psychiatry. 2007;6:168-76.
29. Gureje O, Uwakwe R, et al. Common psychiatric disorders over a lifetime: Age of onset, risk and treatment contact in the Nigerian Survey of Mental Health and Well-Being. African Journal of Medicine and Medical Science 2008;37:207-217.
30. Muller JE, Koen L, et al. Anxiety disorders and schizophrenia. Curr Psychiatry Rep. 2004;6:255-61.
31. Grimsrud A, Stein DJ, et al. The association between hypertension and depression and anxiety disorders: results from a nationally representative sample of South African adults. PLoS One. 2009;4:e5552.
32. Gureje O, Uwakwe R, et al. Depression in adult Nigerians: results from the Nigerian Survey of Mental Health and Well-being. J Affect Disord. 2010;120(1-3):158-64.
33. Dhadphale M, Cooper G, et al. Prevalence and presentation of depressive illness in a primary health care setting in Kenya. Am J Psychiatry. 1989;146:659-61.
34. Patel V, Abas M, et al. Depression in developing countries: lessons from Zimbabwe. BMJ. 2001;322:482-84.
35. Kebede D, Alem A. Major mental disorders in Addis Ababa, Ethiopia. II. Affective disorders. Acta Psychiatr Scand Suppl. 1999;397:18-23.
36. Tomlinson M, Grimsrud A, et al. The epidemiology of major depression in South Africa: results from the South African stress and health study. S Afr Med J. 2009;99:367-73.
37. Strauss PR, Gagiano CA, et al. Identification of depression in a rural general practice. S Afr Med J. 1995;5:755-9.
38. Broadhead J, Abas M. Depressive illness—Zimbabwe. Trop Doct. 1994;24:27-30.
39. Muhwezi WW, Agren H, et al. Life events associated with major depression in Ugandan primary healthcare (PHC) patients: issues of cultural specificity. Int J Soc Psychiatry. 2008; 54(2):144-63.

40. Seedat S, Stein DJ, et al. Life stress and mental disorders in the South African stress and health study. S Afr Med J. 2009;99:375-82.
41. Kinyanda E, Woodburn P, et al. Poverty, life events and the risk for depression in Uganda. Soc Psychiatry Psychiatr Epidemiol. 2011;46(1):35-44.
42. Negash A, Alem A, et al. Prevalence and clinical characteristics of bipolar I disorder in Butajira, Ethiopia: a community-based study. J Affect Disord. 2005;87:193-201.
43. Onyeama M, Agomoh A, et al. Bipolar disorder in Enugu, South East Nigeria: demographic and diagnostic characteristics of patients. Psychiat Danub. 2010;22(suppl 1):S152-7.
44. Stein DJ, Chiu WT, et al. Cross-national analysis of the associations between traumatic events and suicidal behavior: findings from the WHO World Mental Health Surveys. PLoS One. 2010;5:e10574.
45. Peltzer K, Seakamela MJ, et al. Trauma and posttraumatic stress disorder in a rural primary care population in South Africa. Psychol Rep. 2007;100:1115-20.
46. de Jong JT, Komproe IH, et al. Lifetime events and posttraumatic stress disorder in 4 post-conflict settings. JAMA. 2001;286:555-62.
47. Neuner F, Schauer M, et al. Psychological trauma and evidence for enhanced vulnerability for posttraumatic stress disorder through previous trauma among West Nile refugees. BMC Psychiatry. 2004;4(1):34.
48. Pham PN, Weinstein HM, et al. Trauma and PTSD symptoms in Rwanda: implications for attitudes toward justice and reconciliation. JAMA. 2004;292:602-12.
49. Njenga F, Nguithi AN, et al. War and mental disorders in Africa. World Psychiatry. 2006;5: 38-9.
50. German GA. Mental health in Africa: II. The nature of mental disorders in Africa today. Br J Psychiatry. 1987;151:440-6.
51. Kebede D, Alem A, et al. Onset and clinical course of schizophrenia in Butajira, Ethiopia: a community-based study. Soc Psychiatry Psychiatr Epidemiol. 2003;38(11):625-31.
52. Kebede D, Alem A, et al. The sociodemographic correlates of schizophrenia in Butajira, rural Ethiopia. Schizoph Res. 2004;69:133-41.
53. Giel R, de Arango MV, et al. Childhood mental disorders in primary health care: results of observations in four developing countries. A report from the WHO Collaborative Study on Strategies for Extending Mental Health Care. Pediatrics. 1981;68:677-83.
54. Omigbodun O. Developing child mental health services in resource-poor countries. Int Rev Psychiatry. 2008;20:225-35.
55. Gureje O, Omigbodun OO, et al. Psychiatric disorders in a paediatric primary care clinic. Br J Psychiatry. 1994;165:527-30.
56. Adelekan ML, Ndom RJ, et al. Epidemiology of childhood behavioural disorders in Ilorin, Nigeria—findings from parental reports. West Afr J Med. 1999;18:39-48.
57. Tadesse B, Kebede D, et al. Childhood behavioural disorders in Ambo district, western Ethiopia. I. Prevalence estimates. Acta Psychiatr Scand Suppl. 1999;397:92-7.
58. UNICEF. Africa's orphaned and vulnerable generations: children affected by AIDS. New York, NY: UNICEF, UNAIDS and PEPFAR; 2006.
59. Andrews G, Skinner D, et al. Epidemiology of health and vulnerability among children orphaned and made vulnerable by HIV/AIDS in sub-Saharan Africa. AIDS Care. 2006;18:269-76.
60. Nordberg E. Health and the elderly in developing countries with special reference to sub-Saharan Africa. East Afr Med J. 1997;74:629-33.
61. Ogunniyi A, Baiyewu O, et al. Morbidity pattern in a sample of elderly Nigerian residents in Idikan community, Ibadan. West Afr J Med. 2001;20:227-31.
62. Bekibele CO, Gureje O. Self-reported visual impairment and impact on vision-related activities in an elderly Nigerian population: report from the Ibadan Study of Ageing. Ophthalmic Epidemiol. 2008;15(4):250-6.
63. Gureje O, Ademola A, et al. Depression and disability: comparisons with common physical conditions in the Ibadan Study of Ageing. J Am Geriatr Soc. 2008;56(11):2033-8.

64. Gureje O, Kola L, et al. Epidemiology of major depressive disorder in elderly Nigerians in the Ibadan Study of Ageing: a community-based survey. Lancet. 2007;370(9591):957-64.
65. Ben-Arie O, Swartz L, et al. Depression in the elderly living in the community. Its presentation and features. Br J Psychiatry. 1987;150:169-74.
66. Kalaria RN, Maestre GE, et al. Alzheimer's disease and vascular dementia in developing countries: prevalence, management, and risk factors. Lancet Neurol. 2008;7:812-26.
67. Gureje O, Ogunniyi A, et al. APOE ε4 is not associated with Alzheimer's disease in elderly Nigerians. Ann Neurol. 2006;59(1):182-5.
68. Chen C, Mizuno T, et al. A comparative study to screen dementia and APOE genotypes in an ageing East African population. Neurobiol Aging. 2010;31(5):732-40.
69. Gureje O, Ogunniyi A, et al. Functional disability in elderly Nigerians: results from the Ibadan Study of Ageing. J Am Geriatr Soc. 2006;54(11):1784-9.
70. Kautz T, Bendavid E, et al. AIDS and declining support for dependent elderly people in Africa: retrospective analysis using demographic and health surveys. BMJ. 2010;340. doi: 10.1136/bmj.c2841
71. World Health Organization. The global burden of disease: 2004 update. Geneva, Switzerland, World Health Organization; 2008.
72. Ustun TB. The global burden of mental disorders. Am J Public Health. 1999;89:1315-18.
73. Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. PLoS Med. 2006;3(11):e442.
74. Scott KM, Von Korff M, et al. Mental-physical co-morbidity and its relationship with disability: results from the World Mental Health Surveys. Psychol Med. 2009;39(1):33-43.
75. Gureje O, Lasebikan VO, et al. Community study of knowledge of and attitude to mental illness in Nigeria. Br J Psychiatry. 2005;186:436-41.
76. Botha UA, Koen L, et al. Perceptions of a South African schizophrenia population with regards to community attitudes towards their illness. Soc Psychiatry Psychiatr Epidemiol. 2006;41(8):619-23.
77. Adewuya AO, Makanjuola RO. Social distance towards people with mental illness in southwestern Nigeria. Aust N Z J Psychiatry. 2008;42:389-95.
78. Sartorius N. Stigma and mental health. Lancet. 2007;370(9590):810-11.
79. Nock MK, Borges G, et al. Cross-national prevalence and risk factors for suicidal ideation, plans and attempts. Br J Psychiatry. 2008;192(2):98-105.
80. Nock MK, Borges G, et al. Suicide and suicidal behavior. Epidemiol Rev. 2008;30:133-54.
81. Nock MK, Hwang I, et al. Cross-national analysis of the associations among mental disorders and suicidal behavior: findings from the WHO World Mental Health Surveys. PLoS Med. 2009;6(8):e1000123.
82. Emsley R. Focus on psychiatry in South Africa. Br J Psychiatry. 2001;178:382-6.
83. World Health Organization. Mental Health Atlas 2011. Geneva, Switzerland, World Health Organization; 2011.
84. Ndeitei DM. The challenges of human resources in mental health in Kenya. South Afr Psychiatry Rev. 2007;10:33-6.
85. de Jong JT. A comprehensive public mental health programme in Guinea-Bissau: a useful model for Africa, Asia, and Latin American countries. Psychol Med. 1996;26:97-108.
86. Kilonzo GP. The challenges of rehabilitation psychiatry—the Tanzanian experience. Medicus. 1992;11:14-18.
87. The WHO World Mental Health Survey Consortium. Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. JAMA. 2004;291(21):2581-90.
88. World Health Organization. Mental health GAP action programme (mhGAP): scaling up care for mental, neurological and substance abuse disorders. Geneva, Switzerland: World Health Organization; 2008.
89. Odejide OA, Morakinyo JJ. Mental health and primary care in Nigeria. World Psychiatry. 2003;2:164-5.

90. World Health Organization. Organization of services for mental health. Geneva, Switzerland: World Health Organization; 2003.
91. Goldberg D, Gater R. Implications of the World Health Organization study of mental illness in general health care for training primary care staff. Br J Gen Pract. 1996;46:483-5.
92. World Health Organization. Traditional medicine strategy 2002–2005. Geneva, Switzerland: World Health Organization; 2002.
93. Ngoma MC, Prince M, et al. Common mental disorders among those attending primary health clinics and traditional healers in urban Tanzania. Br J Psychiatry. 2003;183:349-55.
94. Sorsdahl K, Stein DJ, et al. Traditional healers in the treatment of common mental disorders in South Africa. J Nerv Ment Dis. 2009;197:434-41.
95. Ae-Ngibise K, Cooper S, et al. Whether you like it or not people with mental problems are going to go to them: a qualitative exploration into the widespread use of traditional and faith healers in the provision of mental health care in Ghana. Int Rev Psychiatr. 2010;22:558-67.
96. Federal Ministry of Health. The national mental health policy, Abuja, Nigeria; 1991.
97. Saraceno B, van-Ommeren M, et al. Barriers to improvement of mental health services in low-income and middle-income countries. Lancet. 2007;370:1061-77.
98. Alem A. Psychiatry in Ethiopia. Int Psychiatry. 2004;8.
99. Callaghan M, Ford N, Schneider H. A systematic review of task-shifting for HIV treatment and care in Africa. Human Resources for Health 2010;8:8.
100. Richter LM, Desmond C. Targeting AIDS orphans and child-headed households? A perspective from national surveys in South Africa, 1995–2005. AIDS Care. 2008;20(9):1019-28.
101. Cheng ST, Siankam B. The impacts of the HIV/AIDS pandemic and socioeconomic development on the living arrangements of older persons in sub-Saharan Africa: a country-level analysis. Am J Commun Psychol. 2009;44(1):136-47.
102. Ogunbodede EO. HIV/AIDS situation in Africa. Int Dent J 2004;54(suppl 1):352-60.
103. Adewuya AO, Afolabi MO, et al. Psychiatric disorders among the HIV-positive population in Nigeria: a control study. J Psychosom Res. 2007;63(2):203-6.
104. Olley BO, Gxamza F, et al. Psychopathology and coping in recently diagnosed HIV/AIDS patients: the role of gender. S Afr Med J. 2003;93:928-31.
105. Olley BO, Seedat S, et al. Persistence of psychiatric disorders in a cohort of HIV/AIDS patients in South Africa: a 6-month follow-up study. J Psychosom Res. 2006;61(4):479-84.
106. Freeman M, Nkomo N, et al. Factors associated with prevalence of mental disorder in people living with HIV/AIDS in South Africa. AIDS Care. 2007;19(10):1201-9.
107. Collins PY, Berkman A, et al. HIV prevalence among men and women admitted to a South African public psychiatric hospital. AIDS Care. 2009;21(7):863-7.
108. Maling S, Todd J, et al. HIV-1 seroprevalence and risk factors for HIV infection among first-time psychiatric admissions in Uganda. AIDS Care. 2011;23:171-8.
109. Burnam MA, Bing EG, et al. Use of mental health and substance abuse treatment services among adults with HIV in the United States. Arch Gen Psychiat. 2001;58(8):729-36.
110. Atkinson JH, Grant I. Natural history of neuropsychiatric manifestations of HIV disease. Psychiat Clin N Am. 1994;17:17-33.
111. Owe-Larsson B, Sall L, et al. HIV infection and psychiatric illness. Afr J Psychiat. 2009;12:115-28.
112. Maj M, Janssen R, et al. WHO neuropsychiatric AIDS study, cross-sectional phase I: study design and psychiatric findings. Arch Gen Psychiatry. 1994;51(1):39-49.
113. Nakimuli-Mpungu E, Bass J, Alexandre P, et al.: Depression, alcohol use and adherence to antiretroviral therapy in sub-Saharan Africa: a systematic review. AIDS and Behavior 2011:1-18.
114. Myer L, Smit J, et al. Common mental disorders among HIV-infected individuals in South Africa: prevalence, predictors, and validation of brief psychiatric rating scales. AIDS Patient Care STDS. 2008;22:147-58.

21ST CENTURY GLOBAL MENTAL HEALTH

ELIOT SOREL

Nearly five hundred million people worldwide suffer from neuropsychiatric disorders, representing, in aggregate, 14% of the global burden of disease in low, middle, and high income countries. Although there have been notable scientific advances in the global mental health domain, challenges still remain in knowledge transmission and application, as well as in access to care and in eradicating shame, stigma, and discrimination.

21st Century Global Mental Health is a comprehensive and authoritative text on the subject of global mental health and its integration with public health and primary care. The book thoroughly examines the progress to date and the challenges that still remain. In five sections, it explores:

- Epidemiology, the global burden of disease, and diagnostic systems
- The determinants of mental health
- Populations' mental health
- Evaluating and strengthening mental health systems
- Mental health policy and financing

"*21st Century Global Mental Health* is a welcome addition to the public health literature ... it covers the many facets of mental health that should be of interest to an eclectic readership. The arguments are compelling and the material is presented in logical fashion by eminent scholars. I recommend it highly and hope that it achieves the desired effect of raising the profile of mental health higher in the global health discourse of the 21st century."

—Sir George Alleyne, Chancellor University of the West Indies, Director Emeritus Pan American Health Organization

JONES & BARTLETT LEARNING
An Ascend Learning Company
5 Wall Street | Burlington, MA | 01803
978-443-5000 | www.jblearning.com