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Michelle Funk, Natalie Drew and [Martin Knapp](#) Mental health, poverty and development

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Mental health, poverty and development

Introduction

Four out of every ten people suffering from mental disorders such as schizophrenia, depression, intellectual disability, alcohol use disorders, epilepsy, and those committing suicide are living in low- and middle-income countries (LMICs)(de Boer et al., 2008, World Health Organization, 2009a).ⁱ

Moreover, the poor are disproportionately affected by mental disorders. People with the lowest socio-economic status (SES) have eight times greater relative risk for schizophrenia than those with the highest SES (Holzer et al., 1986). People with mental disorders are four times more likely to be unemployed or partly employed (Robins, 1991), one-third more likely not to have graduated from high school and three times more likely to be divorced (Cohen, 1993). A recent systematic review of epidemiological research in LMICs found a very strong relationship between many indicators of poverty and common mental disorders (Lund et al., 2011). Rates for common mental disorders are about twice as frequent among the poor compared to the rich in Brazil, Chile, India and Zimbabwe (Patel et al., 1999). Studies, including those in low-income countries, show that people who lose their livelihood are more likely to develop mental health problems or commit suicide (Khan et al., 2008, van der Hoek and Konradsen, 2005). In Brazil, children living in abject poverty are more than five times more likely to have psychiatric disorders than middle class children (Fleitlich and Goodman, 2001). In Australia, the United Kingdom and the United States, four in ten people with a severe mental disorder live in households with incomes below the low-income threshold; the proportion is almost as high in other countries (OECD, 2012).

This evidence of strong links between poverty and mental disorder provides weight to the argument that mental disorders should be an important concern for development strategies implemented by government, NGOs, Bilateral agencies, global partnerships, private foundations, multi-lateral agencies and other stakeholders. This paper, which builds on the findings of WHO's Report on Mental Health and Development (World Health Organization, 2010), discusses how mental disorders are detrimental to development in LMICs, and to the poor within these countries. After highlighting the health, social, economic, and human rights effects of untreated mental disorders in LMICs, the paper outlines effective and cost-effective strategies to address mental disorders and their impacts as part of an overall development strategy.

Health impact

Health burden

Mental and substance abuse disorders are important causes of disease burden, accounting for 8.8% and 16.6% of the total burden of disease in low-income and lower middle-income countries, respectively (World Health Organization, 2009a). Unipolar depressive disorder is the third leading cause of disease burden accounting for 4.3% of the global burden of disease. Significantly, in low-

ⁱ World wide of the 50 million people suffering from epilepsy; 80% live in low and middle income countries; of the 66 million people suffering from depression; 85% live in low and middle income countries; of the 24 million people with an alcohol related problem 82% live in low and middle income countries; of the 1 million people commit suicide each year (rates for attempted suicide are 10 to 20 times higher) 84% of these suicides are committed in low and middle income countries.

income countries unipolar depressive disorder represents almost as large a problem as malaria (3.2% versus 4.0% of total disease burden); but funds being invested to combat depression are tiny compared to those allotted to fight malaria (World Health Organization, 2008a). In middle-income countries unipolar depressive disorders are the biggest contributor to disease burden, accounting for twice the burden of HIV/AIDS, yet funds are not being directed to address this priority.

Looking only at the disability component of the burden of disease calculation, mental disorders account for 25.3% and 33.5% of all years lived with a disability in low- and middle-income countries, respectively. Unipolar depressive disorders, schizophrenia, bipolar disorder and alcohol use disorders are among the top ten causes of disability due to health-related conditions in all countries, as well as in LMICs, where they represent a total of 19.1 % of all disability related to health conditions (World Health Organization, 2008c, World Health Organization, 2009b). This is significant because disability reduces individual ability to contribute to family and community life, thereby negatively affecting economic as well as social development.

Morbidity and mortality rates

People with mental disorders, such as schizophrenia, bipolar disorder and depression are far more likely than the general population to die as a consequence of their untreated mental or physical health problems (Prince et al., 2007, World Health Organization, 2008b, McGrath et al., 2008, Roshanaei-Moghaddam and Katon, 2009). For example, people with schizophrenia and major depression have an *overall* increased risk of mortality 1.6 and 1.4 times, respectively, greater than for the general population (Harris and Barraclough, 1998), and people with schizophrenia have two- to three-fold higher mortality rates compared with the general population (corresponding to 10-25-year reductions in life expectancy), with natural causes accounting for most of this reduction in life expectancy (Laursen et al., 2012).

Increased risks of mortality are not unique to high-income countries. For example, mental illness combined with HIV/AIDS leads to increased mortality in LMICs, and people who are HIV-positive are at a higher risk of suicide (Olley, 2006, Chandra et al., 1998, Meel, 2005). A Tanzanian study found that 57% of women living with HIV experienced depression at least once during a 6 year period and that depression was associated with disease progression and mortality (Antelman, 2007). These findings are significant given the high level of comorbidity between mental disorders and HIV/AIDS: between 11% and 63% of HIV-positive patients in LMICs also suffer from depression (Collins et al., 2006, Petrushkin et al., 2005).

Co-morbid mental and physical disorders are linked to higher mortality and morbidity (Tiihonen et al., 2009, Miller et al., 2006, OECD, 2012), suggesting a need to integrate delivery of currently segmented mental and physical health services (OECD, 2012). Mental disorders worsen outcome for chronic diseases such as cancer, cardiovascular diseases, diabetes and HIV/AIDS, particularly through their impact on unhealthy and risky behaviour, non-adherence to prescribed medical regimens, and diminished immune functioning (World Health Organization, 2008b, Prince et al., 2007, Freeman and Thom, 2006, Meade, 2006).

In addition, 30-40% of people with a mental disorder suffer from at least two mental disorders (OECD, 2012, Wittchen and Jacobi, 2005), and are more likely to experience increases in problem

severity and more substantial functional impairments (OECD, 2012, Kessler et al., 2005a, Andrews et al., 2001, Alonso and Lepine, 2007).

Poor access to quality health services

One of the most important reasons for higher morbidity and mortality rates among people with mental disorders is the inequitable care and treatment that these individuals receive for both mental and physical illnesses. Between 75% and 85% of people with severe mental disorders are unable to access the treatment they need for their mental health problem in LMICs, compared with 35% and 50% of people in high-income countries (Demyttenaere, 2004). This may still underestimate the extent of the treatment gap (OECD, 2012). In addition to poor or no access to care, many people can only access inadequate care. A major international study found around 50% of the sample population seek treatment for depression but only 42% of those treated received adequate treatment (Kessler et al., 2005b). And a 50-country WHO study demonstrated that 69% of people with schizophrenic disorders are not receiving treatment. The treatment gap for schizophrenic disorders was larger in lower-income countries (89%) than in lower-middle-income (69%) and upper-middle-income countries (63%) (Lora et al., 2012).

Treatment rates for physical health problems are much higher than for mental disorders, and in LMICs there was a marked discrepancy (92% and 47%, respectively), wider than in high-income countries (76% and 35%) (Ormel et al., 2008). Large treatment gaps for people with mental disabilities are not surprising given that almost one-third of countries worldwide have no dedicated budget for mental health and one fifth of those that have, spend less than 1 per cent of their total health budget on it (World Health Organization, 2005a). Not only are services scarce, but many governments in LMICs require individuals to pay for their mental health treatment, while treatment for physical health problems is freely provided. This clearly disadvantages poorer people with mental health conditions (World Health Organization, 2005a).

General health services are a major part of the problem in that they often do not identify and treat physical diseases when users have a mental illness, while specialist mental health services almost entirely ignore patients' physical health needs. Reports from many LMICs document lack of access of patients with mental disorders to basic health care, such as general health check-ups, dental care and vaccines, medications and treatment for cuts or bed sores (Ahern, 2007, Mental Disability Rights International and Center for Legal and Social Studies, 2007, Ahern, 2005, Rosenthal, 2002).

Social impact

Mental disorders have diverse and far-reaching social impacts, including homelessness, higher rates of imprisonment, poor educational opportunities and outcomes, lack of employment and limited income-generating opportunities.

Homelessness

Numerous studies have documented the high prevalence of mental disorders (such as schizophrenia, depression, anxiety, attempted suicide, emotional problems, and alcohol and drug abuse) in homeless persons, including street children (Khurana et al., 2004, Kerfoot et al., 2007, Techakasem and Kolkijkovin, 2006, Henry et al., 2010). Twelve-month prevalence of psychiatric morbidity among urban homeless populations in Rio de Janeiro, Brazil, for example, is almost 50% (Lovisi et al., 2003), and lifetime prevalence of major mental illness among homeless people is three times greater than for the general population (Bresnahan et al., 2003, Lovisi et al., 2003). High prevalence

is to a large extent due to increased risk of becoming homeless as a consequence of mental illness, lack of treatment and few opportunities for income-generation (Chamberlain C, 2007, Bresnahan et al., 2003). Homelessness has been found to be relatively common among people with schizophrenia: in rural China a ten-year study of a cohort of people with schizophrenia found that 7.8% had experienced homelessness compared to only 0.9% among the general population (Ran et al., 2006); and in Nigeria a 13-year follow-up of clinically stable outpatients found that 4% were homeless or had an unstable abode (Gureje and Bamidele, 1999).

However, people living on the street are also at increased risk of developing mental illness (de-Graft Aikins and Ofori-Atta, 2007). Harsh economic and social conditions in low-income countries – such as poverty, lack of employment, and family disruptions – can lead to large-scale rural-urban migration, as in Ghana and other parts of Africa (de-Graft Aikins and Ofori-Atta, 2007). In turn, this can cause transient homelessness with attendant high levels of stress, violence, lack of access to education and employment, and associated mental health risks, such as parental neglect rooted in extreme poverty (de-Graft Aikins and Ofori-Atta, 2007).

Prison populations

Reports from a range of countries indicate that incarcerated individuals are much more likely to be suffering from mental illness and substance abuse disorders than people outside of prisons and jails (Fryers et al., 1998, Fazel and Danesh, 2002, Assadi et al., 2006, Agbahowe et al., 1998, Burgermeister, 2003, Amnesty International, 2008, Penal Reform International, World Health Organization and ICRC, 2006). For example, in the Russian Federation, almost one-third of the country's prisoners have mental health problems and most use drugs (Burgermeister, 2003). In Nigeria, researchers found that over one-third of prisoners sampled had a mental disorder (Agbahowe et al., 1998). A study of 193 prisoners in Durban South Africa demonstrated that 23.3% of prisoners were diagnosed with current psychotic, bipolar, depressive and anxiety disorders. The majority of prisoners diagnosed as having an Axis 1 disorder (major mental disorders, learning disorders and substance use disorders) in this study were neither diagnosed nor treated in prison (Naidoo and Mkize, 2012).

Persons who have mental illnesses and/or abuse substances are more likely to be detained in prisons than in treatment facilities, especially in countries that lack adequate mental health services (Penal Reform International, Amnesty International, 2008, World Health Organization and ICRC, 2006). Known in Nigeria as "civil lunatics", these inmates have not committed crimes, but are brought to prisons by family members who could not care for them (Amnesty International, 2008). Because they do not go to court, they may remain in prison indefinitely. .

Poor conditions within prisons and lack of psychiatric treatment could cause further deterioration of mental health (World Health Organization Regional Office for Europe, 1999, World Health Organization Regional Office for Europe, 2007, United Nations Office on Drugs and Crime, 2009). In Hodeida prison in Yemen, Red Cross inspectors found prisoners with mental disorders piled on top of one another, on beds made of concrete blocks, with others chained to walls (Gardaz, 2006).

Educational opportunities and outcomes

Access to education is widely recognised as an essential building block for human and economic development due to its wide-ranging impacts on health, employment, poverty and social capital. While gender, socio-economic and geographical inequities in access to education receive significant attention (United Nations, 2007), the exceedingly poor access to education of mentally disabled

children is largely overlooked. Globally, only 5% of children with physical or mental disabilities complete primary school, compared to nearly 90% of their non-disabled peers (Birdsall et al., 2005). In developing countries, 98% of children with disabilities are not enrolled in school and 99% of girls with disabilities are illiterate (Richler, 2004).

Education is often overtly denied to persons with mental disorders. For instance, in many LMICs, children with mental disorders or intellectual disability are institutionalized and these institutions frequently do not offer education (Mental Disability Rights International and Asociación pro Derechos Humanos, 2004, Open Society Institute, 2005b, Open Society Institute, 2005a, Open Society Institute, 2005c). When children and adults with mental disabilities do have educational opportunities, instead of receiving the support they need, they are often discriminated against, rejected, and ridiculed in school (Astbury T, 2008).

A study in 21 EU countries found that 26% of people with severe mental disorders and 20% of people with severe and moderate disorders left full-time education before age 15, compared with 14% of individuals without mental disorders (OECD, 2012). Longitudinal data for Australia and the United States suggest that approximately one quarter of individuals with a severe or moderate mental disorder at age 18 had left school and had not earned a high school diploma by age 20 (OECD, 2012, Leach and Butterworth, 2012). While many young people who drop out of school eventually do go on to get a diploma, this is not the case for those with emotional or behavioural disabilities (OECD, 2012). As a consequence many people fail to complete an education.

Many studies across LMICs have also found emotional and learning disorders to be important causes of school failure (Patel et al., 2008). After adjustment for potential confoundersⁱⁱ, mental illness in children and adolescents is associated with higher rates of school drop-out, poor academic performance, poor concentration, low motivation, underachievement, and fewer years of completed schooling (Foster and Jones, 2005, Farahati, 2003, Currie and Stabile, 2006, Patel et al., 2008, Myer et al., 2009). Studies in South Africa, Brazil, India, Puerto Rico and Ethiopia have found that 6% to 18% of children and adolescents have mental disorders, indicating that this is a substantial problem in developing countries (Patel et al., 2008). Given the strong association between mental disorders, poverty and lack of education (Patel and Kleinman, 2003, Bor and Dakin, 2006) and the high prevalence of mental illness, untreated mental disorders in children will have significant, long-term negative effects on social and economic development. Failure to recognize and treat mental disorders during childhood will detrimentally affect educational outcomes in children and employment outcomes for up to 20% of the adult population (Knapp et al., 2011) .

Income generation and employment opportunities

Mental illness is associated with high rates of unemployment, leading individuals into economic poverty and depriving them of social networks and status within a community (Harnois and Gabriel, 2000). In OECD countries people with severe mental disorders are 6-7 times more likely, and people with common disorders 2-3 times more likely, to be unemployed. than people without such conditions (OECD, 2012).

ⁱⁱ Including age, household income, parental employment, maternal education, race, gender and previous academic performance.

Rates of experienced discrimination among people with schizophrenia seeking employment are "high and consistent across countries" of varying income levels (Thornicroft et al., 2009). In a cross-sectional survey in 27 countries of 732 people with diagnosed schizophrenia, 70% of whom were unemployed, almost half reported experiencing discrimination in finding or keeping work (Thornicroft et al., 2009).

A number of studies have indicated the reluctance of employers to hire people with mental illness (Stuart, 2006, McDaid et al., 2005, Biggs et al., 2010, McDaid, 2008). For example, a study in Uganda revealed that an important reason for why people with mental illness are denied access to credit services was that they are believed to have impaired functioning, unable to meaningfully engage in productive work and hence incapable of paying back loans. This discriminatory practice denied people the opportunity to escape poverty through income-generating activities (Ssebunnya et al., 2009).

Although individuals with mental disabilities may not be able to work during periods of untreated illness, thus limiting their earnings, for many people, acute episodes are interspaced with good health, and the overwhelming majority of people with mental disorders can manage their illnesses with treatment and support. For instance, someone with schizophrenia, like a cancer patient, can spend most of his or her life healthy, with the illness in remission. However, for someone recovering from mental illnesses, discrimination severely limits income-generating opportunities.

When people with mental disorders are able to access employment opportunities, they often earn less than the rest of the population. WHO's World Mental Health Survey shows that respondents with serious mental illness earned on average a third less than median earnings, with no significant between-country differences. These losses are equivalent to 0.3–0.8% of total national earnings.

Human rights impact

The stigma, myths and misconceptions surrounding mental illness are the root cause of much of the discrimination and human rights violations experienced by people with mental disabilities on a daily basis (Baldwin and Marcus, 2011).

Lack of knowledge about mental illness, its causes, symptoms and recovery-oriented treatment options results in common but erroneous beliefs that it is caused by individuals themselves or by supernatural forces, possession by evil spirits or punishment by God (Lauber and Rossler, 2007, al-Krenawi, 1999, Alem, 2000, Kabir et al., 2004, Adebowale, 1999, Burnard et al., 2006, van de Put, 2002, Qureshi et al., 1998). In many instances these negative feelings result in violence. A systematic review and meta-analysis of observational studies concluded that one in four people with mental disorders have experienced violence in the past year (Hughes et al., 2012).

Misconceptions around mental illness also often lead to the assumption that these conditions are untreatable, and people with them are not valued as members of their communities, nor are resources allocated to provide services or support. Abandonment against their will for long periods in poorly resourced, unhygienic, abusive institutions or prisons is a common consequence (Kakuma, 2010, Penal Reform International, Amnesty International, 2008, World Health Organization and ICRC, 2006). Informed consent to treatment is often systematically ignored, or treatment is simply not available. Basic rights to confidentiality, information (including clinical records), privacy and

communication are frequently violated (Drew et al., 2005, World Health Organization, 2005c). Living conditions are often inhuman and degrading because of overcrowding, unsanitary conditions, poor physical infrastructures, hypocaloric food, and pervasive tobacco smoke (Drew et al., 2011). Examination of 37 hospitals in Bangalore, India, found that 14 that were due to be converted from jails into mental hospitals in 1980 had undergone no structural transformations. Sixteen hospitals used single-person cells to house several patients. Many hospitals placed individuals in cells without water facilities, toilets, or beds, so people had to urinate and defecate in their cells. In addition, individuals received inadequate drug treatment and poor supervision. Comprehensive medical and psychosocial care were almost non-existent in a third of the hospitals (Sharma, 1999).

Another factor compounding these abuses is the fact that people with mental disabilities lack access to proper judicial mechanisms to protect their rights, for example complaints mechanisms or procedures to contest or appeal their detention in mental health facilities (World Health Organization, 2005c). This means that their fundamental rights such as the right to exercise legal capacity and the right to be free from torture, cruel, inhuman and degrading treatment and punishment continue to be violated arbitrarily and with impunity.

People with mental disabilities also often experience human rights violations in their daily lives in the community (Funk et al., 2005b, Drew et al., 2005), with responsibilities handed to guardians who make decisions about place of residence, movements, personal and financial affairs and medical treatment (Drew et al., 2011, World Health Organization, 2005c).

People with mental disabilities also experience restrictions in the right to work, to obtain an education (see societal impact above), as well as to marry and found a family. In Bulgaria, for example, people with mental disabilities may not adopt or foster children (Mental Disability Advocacy Center, 2007a). In the Russian Federation, they may not file for divorce, and may lose custody of their children (Mental Disability Advocacy Center, 2007b).

In many countries people with mental disabilities are denied rights of citizenship and participation, such as the right to vote. In Thailand anyone “being of unsound mind or mental infirmity” cannot vote (Kingdom of Thailand, 2007). People under guardianship are also denied the right to vote in many countries, as is the case in Hungary (Republic of Hungary). This situation contributes to the political marginalization, disenfranchisement and invisibility of people with disabilities (Human Rights Watch, 2012).

Participation means not only the right to vote and to stand for election but also to effectively and fully participate in the conduct of public life (Drew et al., 2011). Participation allows for the creation of an active civil society able to give a voice to the poor and marginalized and drive national reform (Funk et al., 2006).

Yet in the majority of countries, particularly in LMICs, people with mental disabilities and their family members are not able to actively participate in decision-making processes on issues affecting them (Funk et al., 2006). This is in contrast to issues such as HIV/AIDS and physical disabilities, for example, where those most directly affected have had an important say in policy-making and in how development aid is utilized.

This failure can in part be explained by the lack of movement or organizations of people with mental disabilities in many parts of the world, especially in developing countries. However, the

assumption that people with mental disabilities lack the capacity to make meaningful contributions to society due to their mental illness is also a significant barrier to their participation in decision-making processes.

Economic impact

Poverty

People with mental disorders are at much higher risk of descending into poverty than other people. They may not be able to work because of their illness. If employed, their illness may result in more sick days or reduced productivity, in turn reducing income, promotion chances, entitlements to employment-related pensions or health insurance coverage. Secondly, someone with a history of untreated mental illness will not have had the same opportunities as other people to accumulate human capital (i.e. general and specific skills) that allow them to be competitive when searching for work or applying for promotion. The impact on human capital can be particularly detrimental if their illness began in childhood or adolescence, as many mental illnesses do. Thirdly, discrimination, which is particularly strong for mental disorders, may systematically deny people many work opportunities (Ssebunnya et al., 2009, McDaid, 2008, Thornicroft et al., 2009, Thornicroft, 2006).

Poverty also exposes people to risk factors for developing or worsening mental disorders. For example, limited educational and employment opportunities, exposure to adverse living environments (such as poor housing or homelessness), debt, substance abuse and violence are all positively associated with poor mental health (Fitch et al., 2011, de-Graft Aikins and Ofori-Atta, 2007, Patel et al., 2006, Havenaar et al., 2008, Richler, 2004, World Health Organization, 2004, World Health Organization, 2005b). Moreover, people living in poverty are often unable to access treatment or have to spend high proportions of their income on treatment, exacerbating their already precarious financial position (Saxena et al., 2007). People with untreated mental illness often have to rely on financial support from family members to meet basic living needs and to pay for any treatment. (Magliano et al., 2007). Family members may also have to set aside time to provide care and support, diminishing caregivers' opportunities to work, in turn affecting their income, pension and insurance entitlements, thus further increasing the risk of poverty. The economic effects therefore extend beyond the individual with a mental illness to significantly impact the household income (Hamber, 1997, Magliano et al., 2007). Other chronic diseases can also lead to poverty, but in the case of mental illness there is the additional challenge of stigma and discrimination, and their additional negative impacts which further increase the risk of illness, relapse and poverty.

Economic development

Overall, not treating mental disorders is more costly than providing treatment, due to the high indirect costs associated with morbidity. Many costs of untreated mental illness occur outside the health sector, through loss of employment, absenteeism, poor performance within the workplace and premature retirement (McDaid et al., 2005). One study estimated the total annual cost of depression in 28 European countries to be 118 billion Euros, of which 36% was direct treatment cost (e.g. medications, hospitalization) and 64% was due to lost employment, reduced productivity and increased insurance and benefit payments (Sobocki et al., 2006). The World Economic Forum estimated the global cost resulting from mental disorders at US\$ 2.5 trillion for 2010 (increasing to US\$ 6.0 trillion by 2030), of which approximately two-thirds are indirect costs (Bloom et al., 2011). Mental disorders have significant impacts on labor and capital, decreased global economic output. Between 2011 and 2030, mental disorders will account for an aggregate GDP loss of US\$ 16.3 trillion, resulting in a dramatic impact on quality of life (Bloom et al., 2011), and exceeding the

impacts of cardiovascular disease (US\$ 15.6 trillion) and the combined burden of diabetes, cancer, and chronic respiratory diseases (US\$ 14.8 trillion) (Bloom et al., 2011).

Recommended mental health interventions to improve development

Wealth created in countries does not always penetrate deeply enough for the poorest and most vulnerable to benefit; economic inequality in some countries is increasing. Given that a primary aim of development programs is to help the poorest and most disadvantaged, people with mental disorders are an important focus for intervention.

As noted, there are huge health, social, economic and human rights burdens to address, but there are also interventions with demonstrated efficacy that can help improve the situation as previously outlined in WHO's Report on Mental Health and Development (World Health Organization, 2010), and elaborated below.

Targeted poverty-alleviation programs are needed to break the cycle between mental illness and poverty. These must include measures specifically addressing the needs of people with mental disorders, such as accessible and effective services and support, facilitation of education, employment opportunities and housing, and enforcement of human rights protection. Many low-income countries have identified mental health as an important issue, yet lack resources and expertise to address the problem. Financial investments have not always been used efficiently; for example, psychiatric institutions have been built when best evidence indicates the need to transfer services to the community. Having mental illness on the agenda of development organizations will be a critical step in the right direction.

Promoting education and mental health

Despite the fact that child and adolescent mental health problems are associated with poorer educational and employment outcomes in later life, leading to long-term social and economic consequences, most low-income countries have a "near complete absence of any child and adolescent mental health services" (Patel et al., 2008).

Not only is it important to build schools, but to think about who is receiving schooling and the content of the education delivered. Exclusion of children with disabilities is discriminatory and leads to further marginalization. Moreover, people with mental disabilities (as well as those with emotional and learning problems that may not reach clinical diagnostic criteria) need "mental health" support to achieve optimal educational attainment. Educational institutions must identify and assist these children and adolescents.

There is now mounting evidence of effectiveness of early childhood education and parenting interventions. Contemporary early childhood education or preschool programs support cognitive, sensory-motor (physical) and psycho-social development, as well as child-parental relationships (Haddad, 2002). There is robust evidence that investment in early child development (in LMICs) is both highly effective and cost-effective, with improvements in short-term cognitive and mental health benefits, such as improvements in social skills, self-confidence, relationships with adults and motivation. Specific benefits include improved school enrolment rates, younger age of school entry,

better retention rates and academic performance (Engle et al., 2007, Walker et al., 2007). Long-term payoffs include reduced need for incarceration, substance abuse treatment and unemployment payments; indeed multiple positive effects have been documented well into adulthood (Walker et al., 2007). Early childhood and parenting interventions are clearly a major investment opportunity for development.

Treatment services and prevention

Interventions, including pharmacological, psychosocial and care-management strategies for schizophrenia, depression, alcohol misuse, epilepsy and suicide prevention have proved effective across the world (including in poor populations within LMICs) (Bass et al., 2006, Bolton et al., 2003, Bowles, 1995, Patel et al., 2007, Sayers, 2001). For example, group psychotherapy with people with depression in rural Uganda and community outreach to people with schizophrenia in rural India reduced symptom severity, the effects of disability and burden on families (Srinivasa Murthy et al., 2005, Bass et al., 2006, Bolton et al., 2003). Improvements in cognition, life activities and social participation (including use of peer support) were significant and sustained (Srinivasa Murthy et al., 2005, Bass et al., 2006). Improvements were seen in functioning in domains individuals specified as important to everyday life (work, social and community life, care for children and domestic activities), suggesting that treatment can be beneficial to both individuals and communities (Bolton et al., 2003).

Alcohol use disorders: To be effective, strategies should address levels, patterns and context of alcohol consumption through a combination of measures that target the general population, vulnerable groups (e.g. young people and pregnant women), affected individuals and particular problems such as drunk-driving and alcohol-related violence (World Health Organization, 2008d, Room et al., 2002).

The cost-effectiveness of interventions varies according to the prevalence of heavy drinking and the overall level of alcohol consumption. In settings with high rates of heavy drinking, both individually oriented interventions, such as brief physician advice, and population-wide measures, such as taxation on alcoholic beverages, can have notable impacts on population health. When there are low rates of hazardous drinking, interventions targeting particular subgroups or settings, such as drunk-driving or heavy drinkers, appear more cost effective. When there is a high level of unrecorded production and consumption, increasing the proportion of alcohol that is taxed could be more effective than a simple tax increase (Anderson et al., 2009, Chisholm et al., 2004).

Suicide prevention: Suicide is a complex phenomenon, resulting from interaction of multiple factors. Comprehensive public health action to prevent suicidal behaviours should comprise at least the following effective interventions in LMICs: reduced access to means for suicide, responsible and deglamourized media reporting, and early identification and treatment of people with mental and substance use disorders (Vijayakumar et al., 2005a, Vijayakumar et al., 2005c, Vijayakumar et al., 2005b, Mann et al., 2005, Bowles, 1995).

Intellectual disability: Many potential effective and cost-effective interventions exist for prevention of intellectual disability, including provision of skilled care at birth, effective community-based maternal and child health care services, and adequate nutritional supplementation programs (Maulik and Darmstadt, 2007). For example, folic acid fortification in the diet of pregnant women can reduce occurrence of neural tube defects by 50% or more (Durkin et al., 2006). Salt iodisation is the

most cost-effective way of delivering iodine and of substantially improving cognitive development (Engle et al., 2007).

Epilepsy: Approximately two-thirds of patients with epilepsy can live without seizures with first-line antiepileptic medications. Phenobarbital is the most cost-effective intervention for managing epilepsy, costing as little as \$5 USD per person per year in resource-poor countries (Chandra et al., 2006).

The extension of coverage of first-line antiepileptic medicines to 50% of primary epilepsy cases would avert 13-40% of the existing burden in LMICs, at an annual cost per person of 0.20–1.33 international dollars (Chisholm, 2005). Coverage of 80% would avert 21-62% of the burden (Chisholm, 2005).

A project in China demonstrated the feasibility and effectiveness of basic training of primary care physicians to treat epilepsy patients using phenobarbital (Wang et al., 2006). Costs also fell by substantial amounts (Ding et al., 2008).

Interventions delivered in primary care: Numerous studies have also demonstrated that mental health services delivered in primary care generate good health outcomes, including for targeted poor populations (Patel et al., 2007).

Scaling up a full package of primary care intervention for schizophrenia, bipolar disorder, depression and hazardous use of alcohol over a 10-year period would require additional investment of only US\$0.20 per capita per year in low-income countries and US\$0.30 in lower middle-income countries (Chisholm et al., 2007).

Ten principles have been suggested for successful integration of mental health into primary care in LMICs, ranging from clear policy directions and resource allocation at national level through to local-level commitment and capacity building (World Health Organization, 2008b). The best practices described in that report show how LMICs can improve health worker knowledge, skills and confidence to provide mental health intervention; improve health and social outcomes for patients with mental illness and substantially increase coverage of mental health interventions. Importantly, the report also provides detailed guidance on how mental health can be integrated into primary care and scaled up (World Health Organization, 2008b).

Poverty reduction and income generation:

People with mental disorders are capable of working and being productive, especially when provided with appropriate access to services and support, including counseling, medication, vocational skills development and social support, such as peer self-help and home visits (Astbury T, 2008, Murthy, 1998, Orley, 1998, Bolton et al., 2003).

However, important barriers to employment such as stigma and discrimination must be overcome (McDaid, 2008, Mitchell and Harrison, 2001, Thornicroft, 2006, Thornicroft et al., 2009). In developing countries economic activities consist primarily of self-employment and small business operations (International Labour Organization, 2002) Initiatives to improve employment for individuals with mental disorders through grants and support for small business operations have

benefits for these individuals, their families and communities (Astbury T, 2008, Warner and Polak, 1995, Mitchell and Harrison, 2001). For example, BasicNeeds, an NGO working in the area of mental health and development, assessed economic outcomes of people with mental disabilities in their North India Programme, which promotes livelihoods and treatment and care. Key economic gains achieved by users and their families resulted from reduced costs to access treatment and improved capacity to work and earn (Raja et al., 2008).

Interventions that have proved effective in developed countries can be beneficial in LMICs too. Supported employment programs, in which people with severe mental disorders perform paid work with on-going support and training, results in higher employment rates, better wages, more hours of employment per month and better mental health compared to people who received pre-vocational training without support, or standard psychiatric care alone (Crowther et al., 2001)(OECD, 2012).

Although paid work is the most effective way for people with mental health conditions to avoid descending into poverty, at times, when people lose their jobs or are unable to (re)enter employment they may require financial safety nets such as disability benefit, unemployment and social assistance schemes may be needed when people lose their jobs or are unable to (re)enter employment, and should identify the support needs of people with mental disorders (OECD, 2012).

Grants for people living with severe mental illness are generally available in most high-income countries, but not in most LMICs. To provide a financial safety net to people with mental illness and their families (particularly during episodes of illness), governments should develop policies and establish systems for administration of such grants. This is underscored by Articles 27 and 28 of the UN Convention on the Rights of Persons with Disabilities, and in General Comment 5 (on Persons with Disabilities) of the UN Committee on Economic, Social and Cultural Rights which emphasize the importance of providing adequate income and social support to persons with disabilities (UN Committee on Economic Social and Cultural Rights (CESCR, 1994). Studies of other vulnerable groups have shown that receiving income transfers has a positive effect on mental health (Devereux, 2009, Hofmann et al., 2008).

Human rights

Key measures that can be taken to promote and protect the rights of people with mental disabilities include worldwide ratification and implementation of the UN Convention on the Rights of Persons with Disabilities (United Nations General Assembly, 2006). The Convention sets obligations on governments and the international community to promote full inclusion and participation of people with mental disabilities in community life, including provisions aimed at preventing abuses in health care and community contexts. It also protects a full spectrum of rights, including the right to manage one's own financial affairs, marry and found a family, participate in political and public life, access education, work, have an adequate standard of living and social protection, and obtain health and habilitation/rehabilitation services (World Health Organization, 2008d).

Development and implementation of mental health policies and laws is another important catalyst for reform. South Africa's Mental Health Care Act (2002), for example, which integrates international human rights and best practice standards, has driven service reform at provincial and district levels (World Health Organization, 2009). Well-formulated, human rights-oriented policies and laws can help to ensure access to good quality community-based mental health services. Policies

and laws can help prevent abuses in mental health, social care facilities and prisons, and generally promote the rights of people with mental disabilities. They can facilitate introduction of complaints mechanisms and procedures to end arbitrary detention in these facilities. Comprehensive policies and laws can ultimately empower people with mental disabilities to make choices about their lives and promote full integration and participation in the community (Funk et al., 2005b, Funk et al., 2005a). In addition to the establishment of mental health-specific policies and laws, it is also essential to integrate mental health issues into other relevant existing laws and policies related, for example, to health, social welfare, employment, education and criminal justice (World Health Organization, 2005c).

Independent mechanisms, such as visiting committees, to monitor conditions in mental health facilities also promote and protect human rights, helping to ensure that conditions in mental health facilities are acceptable, offer good quality care and respect human rights (World Health Organization, 2005c, Drew et al., 2011). Also key to human rights promotion and protection is the strengthening of civil society in the area of mental health, particularly through provision of mutual support and self help. Self-help groups can serve as key components of community mental health programs in low-resource settings, providing social and financial services, and practical support to individuals and families; they are also associated with better health outcomes (Cohen et al., 2012).

Civil society organizations of people with mental disabilities are also crucial to ensuring their active and meaningful participation in public affairs and bringing about positive reform in mental health (Drew et al., 2011). Their unique perspective means they are in a key position to identify the strategies best able to meet their needs and requirements. Through government lobbying, participation in decision-making processes, awareness-raising on human rights and denouncing of abuses, the consumer movement can be active participants in change in LMICs (Funk et al., 2006).

Key actions

In conclusion, implementation by development agencies of the key actions below, previously described in WHO's Report on Mental Health and Development (World Health Organization, 2010), can redress the ongoing marginalization of people with mental disabilities and improve their development outcomes as well as those for all vulnerable groups.

1. Promote the ratification and implementation of the UN Convention on the Rights of Persons with Disabilities (CRPD) and therein including Article 32, which requires that international cooperation, including international development programmes, is inclusive of and accessible to persons with disabilities including mental disabilities.
2. Integrate mental health in international and regional partnerships and into strategies for health, disability, poverty reduction and development.
3. Adopt appropriate policies and laws consistent with the CRPD that promote autonomy, liberty and the right of persons to make their own decisions and to live independently in the community.
4. Systematically integrate mental health services into all health services, starting with primary care

5. Support inclusive and accessible education for children and adolescents with mental and psychosocial disabilities.
6. Promote the creation of employment opportunities for persons with mental and psychosocial disabilities.
7. Promote research examining impact and outcomes of mental health interventions for reducing poverty, promoting employment and income generation, promoting access to education and ending human rights violations in low and middle income countries.
8. Promote the participation of people with mental health conditions in the development and implementation of mental health, health, disability, poverty reduction and development policies and strategies.

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