

Inside

- 2 Global Mental Health Research: Pearls, Promises, Perils, and Challenges
Rajiv Radhakrishnan, M.B.B.S., M.D.
- 5 Challenges of Becoming a Psychiatrist in Haiti-Partners in Health: an Emerging Model to Train Generalist Physicians
Jennifer Severe, M.D.
- 8 Quality of Life and Mental Health Indicators in Community Members Living Near Open Cast Mines in Northern Colombia
Dyani A. Loo, M.D.
- 10 Forensic Considerations in Refugee Mental Health
Hussam Jefee-Bahloul, M.D.
- 13 A Review of Psychiatry in Tanzania
Sarah C. Cook, M.B., B.Ch., B.A.O.
- 15 The Transformation of Mental Health Culture in India
Sunil Jani, M.D., M.P.H.
- 18 Test Your Knowledge
- 19 Author Information and Upcoming Themes

In This Issue



Just as the May issue of the *American Journal of Psychiatry* features commentaries and a debut column on global mental health (see the commentary by Fairburn and Patel on global dissemination of psychological treatments), this issue of the *Residents' Journal* is focused entirely on the topic of global mental health. The issue begins with an article by Rajiv Radhakrishnan, M.B.B.S., M.D., on the pearls, promises, perils, and challenges of global mental health research. Jennifer Severe, M.D., provides enlightening data on an emerging model to train generalist physicians to treat psychiatric disorders in Haiti. Dyani A. Loo, M.D., presents a study on the quality of life and mental health indicators in community members living near open mines in Northern Colombia. Hussam Jefee-Bahloul, M.D., discusses forensic considerations in refugee mental health. Sarah C. Cook, M.B., B.Ch., B.A.O., provides a review of psychiatry in Tanzania, including history and challenges for care. Last, Sunil Jani, M.D., M.P.H., discusses the transformation of mental health culture in India.

Editor-in-Chief
Arshya Vahabzadeh, M.D.

Deputy Editor and Guest
Section Editor
Misty Richards, M.D., M.S.

Associate Editor
David Hsu, M.D.

Editors Emeriti

Sarah B. Johnson, M.D.
Molly McVoy, M.D.
Joseph M. Cerimele, M.D.
Sarah M. Fayad, M.D.
Monifa Seawell, M.D.

Staff Editor
Angela Moore

Global Mental Health Research: Pearls, Promises, Perils, and Challenges

Rajiv Radhakrishnan, M.B.B.S., M.D.

The landmark Global Burden of Disease Study revealed that mental and behavioral disorders were a major contributor to the global burden of disease in 2010 (1). These disorders accounted for 22.9% of total years lived with disability and 7.4% of total disability-adjusted life years (183.9 million disability-adjusted life years), an increase of 38% since 1990. Despite this, countries on average spend only 3% of total health expenditures on mental health, with the percentage being lower in low- and middle-income countries. Furthermore, the global cost of mental disorders is expected to rise to \$6 trillion (U.S.) by 2030, from the current value of \$2.5 trillion (2).

The picture is grimmer still due to the dearth of skilled human resources for mental health. One-half of the world's population lives in a country where there is one psychiatrist (or less) to serve 200,000 people. The median rate of psychiatrists in low-, lower-middle, upper-middle, and high-income countries is 0.5, 0.54, 2.03, and 8.59 psychiatrists (per 100,000 population), respectively. Studies show that researchers from low- and middle-income countries conduct less than 10% of the clinical trials for new mental health interventions (3) and contribute to less than 10% of the mental health research articles published in international indexed journals, although they support 80% of the world's population (4). The paucity of region-specific research that incorporates local socio-cultural, economic, and infrastructural contexts has limited the development of evidence-based interventions and mental health policy in these regions.

Another factor that has significant global implications is exposure to events such as migration. During the period from 2005 to 2010, 41.5 million people migrated from their country of origin, an increase of 1.6 million from 2000 to 2005 (5). The mental health care provided to this high-risk population is underdeveloped, at best,

and an area of global concern (6). These factors make a compelling case for the imminent need for global mental health research in order to maximize resource utilization and develop innovative, cost-effective intervention strategies.

Pearls and Promises of Global Mental Health Research

Global mental health research programs have evolved from three milestones that have transformed the field of global mental health since 2008. These are 1) the World Health Organization's (WHO's) Mental Health Gap Action Programme (7), instituted to examine the treatment gap between current evidence-based treatment approaches and actual treatment practices; 2) the Movement for Global Mental Health (8), which strives toward mental health advocacy and equitable distribution of resources; and 3) the Grand Challenges in Global Mental Health (9), which forms the backbone of the global mental health research agenda. The research agenda promises to make significant contributions in the areas outlined below.

1. Overcoming the 10/90 divide and the challenge of Western, educated, industrialized, rich, and democratic (WEIRD) studies to increase scientific validity.

The wide disparity between the mental health research from low- and middle-income countries and high-income countries, referred to as the 10/90 divide (i.e., 10% of the research comes from low- and middle-income countries, while 90% comes from high-income countries) has been a cause for concern given the significant contribution of low- and middle-income countries to the global burden of disease (4). The paucity of research is compounded by the increasing recognition that the basic tenets of psy-

chology and cognitive science, which were assumed to be universal and used to define psychopathology globally, were in reality derived solely from studies of people in WEIRD societies (10). In line with this, studies have found a wide variation in the epidemiology, course, outcome, and burden of different psychiatric disorders, such as schizophrenia (11). For example, the reported incidence of schizophrenia varies between 20/100,000 people in London to 7.2/100,000 in Bristol, United Kingdom, 7.9/100,000 in Sao Paulo, Brazil, and 466/100,000 in rural Butajira District, Ethiopia, while there were no cases of schizophrenia reported in studies of semi-nomadic and isolated islanders in South Ethiopia (12–14). These facts question the validity of psychiatric diagnosis and treatment strategies in global settings. Global mental health research is therefore crucial to adding scientific validity to psychiatric epidemiology and diagnostic categorization.

2. Overcoming the mental health gap: breaking down traditional silos, task shifting, and garnering support from high-income countries.

WHO's Mental Health Gap Action Programme, which was launched in 2008, identified "priority conditions" based on established criteria, examined the evidence base for current treatment practices using the Grading of Recommendations Assessment, Development, and Evaluation methodology, and formulated treatment guidelines. In doing so, the traditional silos that separate neurological, psychiatric, and addictive disorders were found to not be feasible from the standpoint of mental health service delivery for most populations worldwide (14). The priority conditions identified were depression, schizophrenia and other psychotic disorders (including bipolar disorder), suicide prevention, epilepsy, dementia, disorders due to alcohol and illicit drug use, and mental disorders in children.

It was also recognized that it would be imperative to train nonspecialist health workers to deliver interventions, given the shortage of trained personnel in low- and middle-income regions (15). Task shifting refers to the strategy of rational redistribution of tasks among health care teams so that highly qualified personnel share specific tasks with less trained health workers in order to maximize efficiency of available human resources. The feasibility of such a task-shifting strategy has garnered the attention and support of high-income countries aimed at reducing the treatment gap in low- and middle-income countries.

The National Institute of Mental Health Collaborative Hubs for International Research on Mental Health initiative has funded four international research hubs, involving investigators from 20 countries in Latin America, Africa, and South East Asia, in collaboration with centers of excellence in the United States and Europe to examine the efficacy and cost-effectiveness of task-shifting strategies. Concurrently, the United Kingdom's Department for International Development has funded the Programme for Improving Mental Health Care, a 6-year research consortium led by the University of Cape Town in collaboration with Ethiopia, India, Nepal, South Africa, and Uganda, to adapt and evaluate the Mental Health Gap Action Programme intervention guideline in primary health care settings, initially in the North West province of South Africa and subsequently to be scaled up to the other countries.

3. Overcoming barriers to care of mental illness by coordinated effort.

The main barriers to global mental health delivery, apart from the lack of culturally sensitive evidence-based treatments (discussed above), include weak engagement of local agencies and pervasive stigma. The Movement for Global Mental Health, which advocates for the human rights of people with psychiatric disorders, as well as for active policy changes and research, has resulted in increased local-global engagement, bringing together an international coalition of actors and agencies from various areas of expertise, including psychiatrists working within the biomed-

ical model, social scientists, local policy makers, and user-group representatives (8). The Movement for Global Mental Health also has the advantage of the lessons learned from the global response to international HIV/AIDS programs, which reflected the intricacies of a local-global power dynamic and the need to balance priorities set by top-down global funding mechanisms versus the local ground realities of health care needs. The proposed integration of global mental health services with primary care services or HIV/AIDS programs is likely to provide valuable information on identifying barriers to care and tackling stigma. Research into the use of technology, such as telepsychiatry, offers interesting possibilities to enable local-global engagement and integration of mental health care delivery (16).

Perils of Global Mental Health Research

Although global mental health research offers significant promises, it is important to consider some of the perils of this strategy. Some of the perils include 1) ethical concerns of exploitation of people living in low- and middle-income countries where clear legal and ethical frameworks for the conduct of research are lacking (17); 2) concerns that the amount of resources and effort required to sustain large collaborative research consortia may compromise research innovation (18); 3) difficulty with independent replication of findings given the resources required to carry out such collaborative research; and 4) the loss of therapeutic pluralism because of propagation of a Western biomedical model and resultant subordination of complementary and alternative systems of care (19).

Challenges in Global Mental Health Research

The Grand Challenges in Global Mental Health Initiative (9), consisting of over 400 global experts, has prioritized the top 25 challenges of global mental health, ranked according to their potential to reduce disease burden, their impact equity, their immediate impact, and their feasibility. The top four challenges are 1)

acquiring knowledge about psychiatric disorders from a life-cycle approach that acknowledges their developmental origins; 2) devising intervention strategies, including system-wide health care policy changes that would reduce stigma, discrimination, and social exclusion and that would limit the impact of mental illness on the family and extended community; 3) devising evidence-based treatment strategies that are culturally sensitive, locally acceptable, and have adequate scalability with regard to larger contexts; and 4) efforts to understand the impact of environmental factors, such as poverty, war, and migration, on psychiatric disorders. These challenges highlight the need for both "discovery" and "delivery" research in order to reduce the global burden of mental disorders.

Conclusions

Global mental health research offers the promise of providing much needed data from low- and middle-income countries on the life course of psychiatric disorders. Such research can also promote local-global collaboration, equitable distribution of resources (including increased investment by high-income countries), and devise innovative, culturally sensitive interventions to tackle barriers to mental health care (including stigma). The speculated perils include the ethical concerns of conducting research in low- and middle-income countries, difficulty with replication of research, compromise on research innovation, and the loss of therapeutic pluralism. Global mental health research faces challenges in areas of both the discovery of targets with adequate scalability and the delivery of cost-effective mental health interventions.

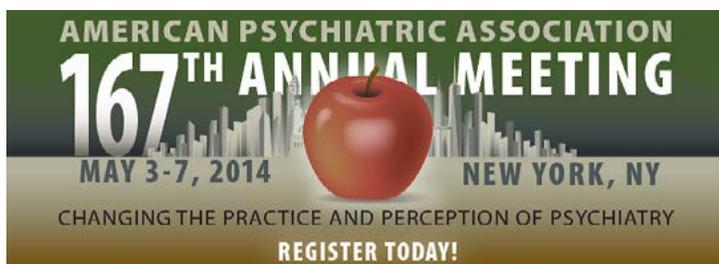
Dr. Radhakrishnan is a second-year resident in the Department of Psychiatry, Yale School of Medicine, New Haven, Conn.

In the February 2014 Psychiatric Services column on global mental health reforms, the challenges in developing a community-based program in Brazil are described by [Scivoletto et al.](#)

References

1. Whiteford HA, Degenhardt L, Rehm J, Baxter AJ, Ferrari AJ, Erskine HE, Charl-

- son FJ, Norman RE, Flaxman AD, Johns N, Burstein R, Murray CJ, Vos T: Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet* 2013; 382:1575–1586
2. Bloom DE, Cafiero ET, Jané-Llopis E, Abrahams-Gessel S, Bloom LR, Fathima S, Feigl AB, Gaziano T, Mowafi M, Pandya A, Prettner K, Rosenberg L, Seligman B, Stein AZ, Weinstein C: The global economic burden of noncommunicable diseases, from the Proceedings of the World Economic Forum, Geneva, 2011
 3. Patel V, Araya R, Chatterjee S, Chisholm D, Cohen A, De Silva M, Hosman C, McGuire H, Rojas G, van Ommeren M: Treatment and prevention of mental disorders in low-income and middle-income countries. *Lancet* 2007; 370:991–1005
 4. Saxena S, Paraje G, Sharan P, Karam G, Sadana R: The 10/90 divide in mental health research: trends over a 10-year period. *Br J Psychiatry* 2006; 188:81–82
 5. Abel GJ, Sander N: Quantifying global international migration flows. *Science* 2014; 343:1520–1522
 6. Siriwardhana C, Stewart R: Forced migration and mental health: prolonged internal displacement, return migration and resilience. *Int Health* 2013; 5:19–23
 7. World Health Organization: Intervention Guide for Mental, Neurological and Substance Use Disorders in Non-Specialized Health Settings: Mental Health Gap Action Programme (mhGAP). Geneva, World Health Organization, 2010
 8. Campbell C, Burgess R: The role of communities in advancing the goals of the Movement for Global Mental Health. *Transcult Psychiatry* 2012; 49:379–395
 9. Collins PY, Patel V, Joestl SS, March D, Insel TR, Daar AS; Scientific Advisory Board and the Executive Committee of the Grand Challenges on Global Mental Health; Anderson W, Dhansay MA, Phillips A, Shurin S, Walport M, Ewart W, Savill SJ, Bordin IA, Costello EJ, Durkin M, Fairburn C, Glass RI, Hall W, Huang Y, Hyman SE, Jamison K, Kaaya S, Kapur S, Kleinman A, Ogunniyi A, Otero-Ojeda A, Poo MM, Ravindranath V, Sahakian BJ, Saxena S, Singer PA, Stein DJ: Grand Challenges in Global Mental Health. *Nature* 2011; 475:27–30
 10. Henrich J, Heine SJ, Norenzayan A: The weirdest people in the world? *Behav Brain Sci* 2010; 33:61–83; discussion 83–135
 11. Kirkbride JB, Fearon P, Morgan C, Dazzan P, Morgan K, Tarrant J, Lloyd T, Holloway J, Hutchinson G, Leff JP, Mallett RM, Harrison GL, Murray RM, Jones PB: Heterogeneity in incidence rates of schizophrenia and other psychotic syndromes: findings from the 3-center AESOP Study. *Arch Gen Psychiatry* 2006; 63:250–258
 12. Alem A, Kebede D, Fekadu A, Shibire T, Fekadu D, Beyero T, Medhin G, Negash A, Kullgren G: Clinical course and outcome of schizophrenia in a predominantly treatment-naive cohort in rural Ethiopia. *Schizophr Bull* 2009; 35:646–654
 13. Beyero T, Alem A, Kebede D, Shibire T, Desta M, Deyessa N: Mental disorders among the Borana semi-nomadic community in Southern Ethiopia. *World Psychiatry* 2004; 3:110–114
 14. Patel V: Global mental health: from science to action. *Harv Rev Psychiatry* 2012; 20:6–12
 15. Tomlinson M, Rudan I, Saxena S, Swartz L, Tsai AC, Patel V: Setting priorities for global mental health research. *Bull World Health Organ* 2009; 87:438–446
 16. Farrington C, Aristidou A, Ruggeri K: mHealth and global mental health: still waiting for the mH2 wedding? *Global Health* 2014; 10:17
 17. Ruiz-Casares M: Research ethics in global mental health: advancing culturally responsive mental health research. *Transcult Psychiatry* (Epub ahead of print, March 25, 2014)
 18. Dockrell HM: Presidential address: the role of research networks in tackling major challenges in international health. *Int Health* 2010; 2:181–185
 19. Halliburton M: Finding a fit: psychiatric pluralism in South India and its implications for WHO studies of mental disorder. *Transcult Psychiatry* 2004; 41:80–98



Residents, fellows, and students are invited to attend this year's *American Journal of Psychiatry Residents' Journal* workshop, to take place at the Annual Meeting in New York. This year's workshop title is "The American Journal of Psychiatry Residents' Journal: How to Participate." Bring your thoughts and ideas about the *Residents' Journal*; hear a brief presentation about the Journal's new developments; meet with *Residents' Journal* editors and editorial staff as well as the *American Journal of Psychiatry* Editor-in-Chief Robert Freedman, M.D. The workshop is scheduled for Saturday, May 3, 2014, from 1:30 p.m. to 3:00 p.m. in the Jacob K. Javits Convention Center, Level I, Room 1D03/04. For further information please contact ajp@psych.org.

Challenges of Becoming a Psychiatrist in Haiti-Partners in Health: an Emerging Model to Train Generalist Physicians

Jennifer Severe, M.D.

In Haiti, neuropsychiatric disorders are estimated to account for 10.7% of the global burden of disease (1). In the Birth of the Klinik, Dr. Farmer depicted how “the vast majority of the population believed that mental problems were of ‘supernatural’ origin and not amenable to treatment by physicians” (2). Unfortunately, the lack of access to mental health services has perpetuated this belief. However, since the devastating earthquake of 2010, the new availability of safe and effective psychiatric treatment in some clinics has begun to dismantle many of the existing barriers to mental health care, exposing the limited resources available, to mount a patient-centered care response.

As a Haitian generalist physician, I have benefited from combined onsite and remote psychiatric training from psychiatrists in the United States to provide mental health care in rural Haiti. Currently, as a psychiatric trainee in the United States, I am able to appreciate the value of psychiatric residency training as well as the effectiveness of utilizing generalist physicians in meeting the mental health needs in low-resource settings.

Despite Haiti’s legacy as the “pearl of the Antilles” in the late 15th century and the first independent black republic in the world, it is the poorest country in the Western hemisphere. Sixty-two percent of its population lives below the poverty line of \$1.25 (U.S.) per day in an environment marked by political and social instability.

Social and economic pressures often drive Haitian medical students to choose a specialty that provides more financial incentives than psychiatry, with greater academic support from foreign universities and hospitals. Moreover, mental health expenditures are reported as only 0.61% of the total health budget (1).

Psychiatric Training in Haiti

Haiti had no psychiatrist until 1936 (3). Mental health care was almost exclusively in the hands of folk practitioners whose practices are said to mirror aspects of Western psychiatry (2, 4).

The first Haitian physician to become a psychiatrist, the renowned Dr. Louis P. Mars, was trained in Paris in 1935 and later at Columbia University in New York in 1939. Dr. Mars laid the foundation of evidence-based psychiatry in academic training and replaced the custodial care of the mentally ill with safe and effective treatment. Of note, Haiti has one accredited teaching psychiatric facility, the Centre Psychiatrique Mars and Kline, which is the result of a combined effort between Dr. Mars and his American colleague, Dr. Nathan Kline. The Centre Psychiatrique Mars and Kline was established as compensation by foreign pharmaceutical companies who conducted experimental research using the antipsychotic perphenazine on Haitian patients (2, 5). The center welcomes medical students in their fifth year for psychiatric rotations and offers a 3-year residency program.

Unfortunately, in Haitian medical schools, state-of-the-art psychiatric education is not a significant part of the curriculum and constitutes only 3% of didactic hours according to a 2011 World Health Organization-Assessment Instrument for Mental Health Systems report (6). Furthermore, due to underfinancing, the psychiatric care at the Centre Psychiatrique Mars and Kline has deteriorated, and the care provided is no longer humane or up-to-date. As a medical student, I remember seeing the relief on my colleagues’ faces as they stepped out of the psychiatric center. Patients were beaten to obey orders, locked in tiny concrete cells, or handcuffed to windows, practices that continue today. Fortunately, ECT can be performed but without any premedication.

Overall, the limitations in psychiatric training and treatment that exist in Haiti serve to reduce motivation for training in psychiatry (Table 1). Only one or two students at most take advantage of the Centre Psychiatrique Mars and Kline residency program, and the residency training slots often go unfilled for years at a time. The vast majority of Haitian psychiatrists are trained abroad and practice

TABLE 1. Data on Mental Health Care Training, Providers, and Resources in Haiti

Item	Total Number
Haiti’s population	10,413,211
Medical schools (International Medical Education Directory and/or Avicenna listed)	4
Psychiatrists in Haiti	23 (0.22/100,000)
Haitian psychiatrists overseas ^a	
Physicians in Haiti	2,603 (25/100,000)
Public mental health facilities: in- and outpatient services	2 (140 beds)
Private mental health facilities: in- and outpatient services	3 (100 beds)
Substance abuse outpatient clinic	1

^a Data are unavailable.

abroad, as evidenced by the creation in 1984 of the Haitian American Psychiatric Association in New York City.

Method

A New Health Initiative

On January 12, 2010, a 7.0-magnitude earthquake struck Haiti, causing a death toll over 200,000, with 2.3 million left homeless and 1.5 million displaced. This catastrophic event brought new attention to mental health at a national and international scale (7). Special emphasis was placed on training mental health providers in the most common psychiatric conditions, including posttraumatic stress disorder and depression. Partners in Health, a nongovernmental organization based in Boston, and its sister organization

Zanmi Lasante, based in Haiti, developed several programs to address this need, among them a successful model to develop the capacity of general physicians to function as psychiatric providers within the context of a multidisciplinary team in health facilities, prisons, orphanages, and mobile clinics (Table 2).

As a generalist physician trained in Haiti, I benefited from onsite intensive training covering common mental and neurologic disorders, psychopharmacology, written examinations, and supervised clinical encounters. The training also included research and culturally appropriate psychiatric evaluation materials. Ongoing supervision was then provided on a weekly basis, both locally and remotely, by telephone and e-mails.

Results

Can Generalist Physicians Stand as Psychiatrists?

Generalists can offer comprehensive health care to the mentally ill without relying on referral or consultation for most common medical comorbid conditions. Through utilizing mobile clinics, generalists have brought mental health services to the community, which reduces stigma and improves adherence to follow-up and treatment. Nineteen patients were initially recorded, and after 18 months, this number has reached 30–40 patients per clinic, with up to 70% attendance for follow-up visits.

This model of training has nurtured broader participation of generalist physicians within the Partners in Health/

TABLE 2. Generalist Physician Training Model

Disorders	Subgroups of Disorders Covered in Initial Training	Subgroups of Disorders Covered Based on Cases Identified	Screening Tools/Sources Used to Provide Care	Psychiatric Formulary Available
Mood disorders	Major depressive disorder, depression with psychotic features, bipolar disorder, serotonin syndrome	Obsessive-compulsive disorder, treatment-resistant depression	DSM-IV, Zanmi Lasante Depression Symptom Inventory, Yale–Brown Obsessive Compulsive Scale, scholarly sources	Fluoxetine, amitriptyline, citalopram ^a , valproic acid, carbamazepine
Anxiety disorders	Generalized anxiety disorder, post-traumatic stress disorder, panic disorder		DSM-IV, scholarly sources	Fluoxetine, diphenhydramine, lorazepam, diazepam
Psychotic disorders	Schizophrenia, schizophreniform disorder, brief psychotic disorder, schizoaffective disorder, neuroleptic malignant syndrome	Shared psychotic disorder, schizophrenia, catatonic type, delusional disorder	DSM-IV, Bush-Francis Catatonia Rating Scale, scholarly sources	Haloperidol tablet, haloperidol injection, risperidone, quetiapine ^a
Medical/neurologic conditions associated with psychiatric disorders	Epilepsy, migraine, cerebral palsy, Parkinson’s disease, neurosyphilis, Wilson’s disease, AIDS, stroke	Vitamin B ₁₂ deficiency	Massachusetts General Hospital Handbook of Neurology, Harrison’s Principles of Internal Medicine, scholarly sources	Available treatment for primary causes
Cognitive disorders	Dementia, delirium		DSM-IV, Harrison’s Principles of Internal Medicine, scholarly sources	Available treatment for primary causes, risperidone
Disorders usually first diagnosed in infancy, childhood, or adolescence	Intellectual disability	Attention deficit hyperactivity disorder, autism, learning disorder	DSM-IV, scholarly sources	N/A
Other disorders		Conversion disorder, dissociative identity disorder, male erectile disorder, premature ejaculation, paraphilia not otherwise specified, dyssomnia not otherwise specified	DSM-IV, scholarly sources	Counseling

^a The medication came from the United States, for specific patients, because it is not available in Haiti.

Zanmi Lasante health care system, expanding the number of locally trained physicians from two to 14 in a matter of 18 months. Partners in Health/Zanmi Lasante not only offers access to mental health care within its rural catchment area of 1.5 million inhabitants but also to those coming from all over the country.

Conclusions

As stated in an article by Khoury et al., "currently, the majority of Haitians do not have the option of choosing biomedical mental healthcare, and while they are seeking mental health treatment from voodoo systems of care, it is more out of limited options than a cultural belief in its efficacy" (8). As such, more initiatives to train and integrate generalist physicians in mental health care will not only bring more attention to psychiatry but also increase access to improved mental health care in general. Through training in academic psychiatry, I hope to draw more psychiatrists and generalist physicians in the field and continue to transform the way mental health services are perceived and delivered in Haiti.

Dr. Severe is a first-year resident in the Department of Psychiatry, Baystate Medical Center/Tufts University School of Medicine, Springfield, Mass.

The author thanks Drs. Stephanie Engel and Misty Richards for their editorial support. The author also thanks her mentor John Hopkins, M.D., M.S.P.H., Baystate Medical Center/Tufts University School of Medicine, for his invaluable guidance.

References

1. US Department of Mental Health and Substance Abuse/World Health Organization: Mental Health Atlas, 2011. http://www.who.int/mental_health/evidence/atlas/profiles/hti_mh_profile.pdf
2. Farmer P: The birth of the klinik: a cultural history of Haitian professional psychiatry, in *Ethnopsychiatry: the Cultural Construction of Professional and Folk Psychiatries*. Edited by Gaines AD. Albany, New York, State University of New York, 1992, pp 251–272
3. Mars L: Historical notes psychiatry in Haiti. *Am J Psychiatry* 1950; 106: 549–549
4. Kiev A: Folk psychiatry in Haiti. *J Nerv Ment Dis* 1961; 132:260–265
5. Nicolas G, Jean-Jacques R, Wheatley A: Mental health counseling in Haiti: historical overview, current status and plan for the future. *J Black Psychol* 2012; 38:509–519
6. World Health Organization: Le système de santé mentale en Haïti: Rapport d'évaluation du système de Santé mentale en Haïti à l'aide de l'instrument d'évaluation conçu par l'Organisation Mondiale de la Santé mentale. Port-au-Prince, Haïti, Ministère de la Santé Publique et de la population, Organisation Mondiale de la Santé, Organisation Panaméricaine de la Santé, 2011
7. Raviola GJ, Severe J, Therosome T, Oswald C, Belkin G, Eustache E: The 2010 Haiti earthquake response. *Psychiatr Clin N Am* 2013; 36:431–450
8. Khoury NM, Kaiser BN, Keys HM, Brewster A-R T, Kohrt BA: Explanatory models and mental health treatment: is vodou an obstacle to psychiatric treatment in rural Haiti? *Cult Med Psychiatry* 2012; 36:514–534



SUBSCRIBE

If you will be completing your residency this year, we would like your help in recruiting new subscribers by encouraging an incoming resident or fellow to subscribe to our monthly e-publication. Also, if you'd like to continue receiving e-mail notification alerts when each issue of the *AJP Residents' Journal* is published, send your new e-mail address to ajp@psych.org with the subject line "New e-mail address post-residency."

Quality of Life and Mental Health Indicators in Community Members Living Near Open Cast Mines in Northern Colombia

Dyani A. Loo, M.D.

As the World Health Organization notes, 14% of the global burden of disease is attributed to mental, neurological, and substance use disorders, with up to 75% of people in low-income countries lacking access to treatment (1). Depression, the leading cause of disability, affects over 350 million worldwide (1). People who have faced violence, poverty, and marginalization are more vulnerable to perturbations in mental health. Likewise, people with mental health issues are more vulnerable to victimization, stigma, and discrimination, leading to increased disability, decreased participation in public affairs, lowered ability to access services, and less hope for the future (2).

Rural areas in northern Colombia are high risk because of chronic conflict between communities and multinational corporations. Forty percent of Colombia's territory has been targeted to develop mining and crude oil extractive projects (3), and two of the country's largest multinationals have maintained a 30-year presence, in the regions of La Guajira and Cesar, practicing open-pit coal mining. These practices decrease air quality due to emission of suspended particulate matter, SO₂ and NO₂ (4), which are linked to respiratory problems, cancer (5), postneonatal mortality (6), and increased suicide risk (7) with chronic exposure. Coal mining areas are also at greater risk for socioeconomic disadvantage and adverse health effects associated with reduced quality of life (8).

The rural communities involved are located in the regions of La Guajira and Cesar. Residents include those of Colombian and Afro-Colombian descent, as well as indigenous tribes who rely on cattle herding and subsistence/small-scale farming. Communities often have mud-brick multigenerational dwellings, local burial grounds, or designated ancestral

land. Limited transportation between remote areas translates to decreased access to services and communication.

In a 2011 study, the Colombian government confirmed elevated total suspended particulates in the northern region and, based on projected air quality values, ordered resettlement of communities adjacent to the mines (9, 10). Although resettlement of Cesar communities was scheduled for completion in 2013, plans stalled because of breakdown in negotiations. To date, no systematic assessment about the impact of resettlement on quality of life and mental health in these areas has been performed. Therefore, the goals of the present study were to identify challenges facing citizens in these regions, characterize the mental distress expressed by residents, and verify the correlation of current air pollution with proximity to mines.

Method

Inclusion criteria were living in Guajira or Cesar for more than 5 years and aged >18 years. Exclusion criteria were pregnancy, living in multiple regions, and having physical/cognitive disorders precluding reliable assessment. All study procedures were approved by the institutional review board at the University of Miami, with prior approval from local community representatives.

The geographic distribution of mines was assessed, followed by air quality evaluation using a calibrated Aeroset mass particle counter (Met One Instruments, Grants, Pass Ore.), in communities near mines and in a rural control area 150 km

away. Measurements were conducted for total suspended particulates and PM₁₀ (particles with diameter <10 μm), which are of health concern due to their ability to enter farther into the respiratory tract. Outdoor measurements were taken at global positioning system points in a 1-mile radius during peak and off-peak times, averaged over multiple assessments.

Aggregate-level data regarding illnesses treated during 2012–2013 were collected from the only community clinic serving the target region. Seven focus groups were formed from eligible residents, and discussions were held over 2 weeks regarding social circumstances, needs, and health concerns. Participants who met inclusion criteria were invited to take the Duke Health Profile and Patient Health Questionnaire-9, screening assessments used to evaluate quality of life and depression, respectively. The total number of participants was 34. Data points between rural areas near coal mines and the control area were averaged and compared for statistical significance using Student's t test.

Results

Levels of PM₁₀ associated with target sites were on par with those in the nearest urban area and two to three times higher when compared with levels in the rural control (for both site 1 and site 2: $p < 0.01$). Low scores were observed for physical, mental, and perceived health (Table 1), with the majority of participants screening positive for risk of depression (61.29%) (Table 2). Respiratory infections were documented as the

TABLE 1. Results From the Duke Health Profile^a

Physical Health	Mental Health	Perceived Health
29.35	53.23	25.8

^a Data represent the mean scores for all participants.

TABLE 2. Results From the Patient Health Questionnaire-9

Score	N	Rate (%)	Provisional Diagnosis
5-9	8	25.81	Minimal symptoms
10-14	4	12.90	Major depression, mild
15-19	4	12.90	Major depression, moderately severe
>20	3	9.68	Major depression, severe

most commonly seen illness. Conflicts described included poor mediation, inconsistent representation, and cultural insensitivity.

Discussion

Health concerns in this region are confounded by problems common to rural areas, such as poor health care access and lack of census tracking. One mining company reported awareness of respiratory concerns, denying fault. Regardless of causation, low scores on the Duke Health Profile and poor air quality indicate a reduced quality of life. In addition, being at high risk for depression makes this population more vulnerable when stressed with relocation negotiations.

Problems noted during the resettlement process include split communities, mistakes in relocating burial grounds, culturally inappropriate housing, and ineffective transitioning from farming to assigned urban projects. Nuevo Roche, an example of a resettlement community built by a coal mining company in La Guajira, consists of urban-style units drastically different from traditional houses, fenced plots too small for cattle herding, and a school with walls cracking because of subpar materials. Another community, Nuevo Espinal, was resettled into an area without a water supply, schools, or transportation access. In moving forward, minimizing these issues would be of benefit to both residents and coal mine public relations; however, conflict over assigning blame continues to propagate hostile communication and perception.

Conclusions

Although resettlement of Cesar communities was scheduled for completion in 2013, negotiations are stalled, and residents now face recurring food shortages acknowledged by the United Nations. The need for improved mediation is apparent, as communities suffer from polluted air, elevated depression screening markers, and increased social conflict. This dialogue and reciprocal understanding is vital in order to begin instituting critical services. Key objectives include relocating community members to secure locations with appropriate resources, providing access to sustainable jobs and schools, and performing these operations in a culturally sensitive manner. Mental health providers, trained community workers, and primary care physicians who are trained in the treatment of depression are also immediately needed.

Dr. Loo is a first-year resident in the Department of Psychiatry, University of New Mexico, Albuquerque, N.M.

The author thanks Mark Stoutenberg, Ph.D., M.S.P.H., Research Assistant Professor in the Department of Public Health Sciences at the University of Miami, and Naresh Kumar, Ph.D., Associate Professor of Environmental Health in the Department of Epidemiology and Public Health, University of Miami, for their mentorship and guidance. Dr. Stoutenberg is the principal investigator of this study.

The case of a depressed young man from Colombia living in the United States is presented in the debut of the Perspectives in

Global Mental Health column in the May issue of the [American Journal of Psychiatry](#).

References

1. World Health Organization: World Health Organization Mental Health Gap Action Programme. Geneva, World Health Organization, 2014. http://www.who.int/mental_health/mhgap/en/
2. World Health Organization: Mental Health and Development: Targeting People With Mental Health Conditions as a Vulnerable Group. Geneva, World Health Organization, 2010
3. Vicente A, Martin N, Slee DJ, Birse M, Lefebvre S, Bauer B: The mining and energy “boom.” PBI Colombia 2011; 17:4-7
4. Ghose MK, Majee SR: Air pollution caused by opencast mining and its abatement measures in India. J Environ Manage 2001; 63:193-202
5. Fernandez-Navarro P, Garcia-Perez J, Ramis R, Boldo E, Lopez-Abente G: Proximity to mining industry and cancer mortality. Sci Total Environ 2012; 435-436:66-73
6. Woodruff TJ, Parker JD, Schoendorf KC: Fine particulate matter (PM2.5) air pollution and selected causes of postneonatal infant mortality in California. Environ Health Perspect 2006; 114:786-790
7. Yang AC, Tsai S, Huang NE: Decomposing the association of completed suicide with air pollution, weather, and unemployment data at different time scales. J Affect Disord 2010; 129:275-281
8. Zullig KJ, Hendryx M: A comparative analysis of health-related quality of life for residents of US counties with and without coal mining. Public Health Rep 2010; 125:548-55
9. Huertas JI, Huertas ME, Izquierdo S, Gonzalez ED: Air quality impact assessment of multiple open pit coal mines in northern Colombia. J Environmen Manage 2012; 93:121-129
10. Huertas JI, Huertas ME, Solis DA: Characterization of airborne particles in an open pit mining region. Sci Total Environ 2012; 423:39-46

Forensic Considerations in Refugee Mental Health

Hussam Jefe-Bahloul, M.D.

Increasingly, people in areas of turmoil worldwide are becoming refugees in safer countries. Trauma and its reactions are at the center of each and every case of the refugee or asylum seeker. Refugees have to navigate difficult living situations and adjustments in their new homes, which increases their stress levels and symptoms and hinders their adjustment process. Refugees come in contact with the host country's legal system early in the process of immigration. History of mental illness or severe trauma compounded by poor adjustment to the foreign culture might result in acts or behaviors that break the law. The present article provides discussion of areas where forensic psychiatry is involved in refugee mental health and presents some points that should be taken into consideration when treating refugees and asylum seekers.

Refugees, Culture, and Adjustment

Culture shapes personal identity, emotional responses, and patterns of reasoning, and thus it can influence motivation and intent in situations involving criminal actions (1). Culture is sometimes used as a means of defense regarding crimes committed by "miscalcured" people. This point of view suggests that it is not fair to judge the actions of someone based on a culture that is "foreign" to the person. However, one can argue that in doing so, we are unbalancing the "justice for all" principle by excusing actions based on culture (1). Boehnlein et al. (2) noted the complexities of this area and suggested that applying cultural considerations to the process of sentencing may be less contentious than introducing culture as a defense against crime. Hence, a balanced *cross-cultural formulation* of a forensic case should include frameworks of assessment that cover social predicaments, history of migration, and the relationship between the culture of

the person in concern and that of U.S. society (1).

Culture frames problems and presents us with the categories and concepts through which we organize and understand our own actions. In the justice system, supplying the cultural context of a given behavior changes its meaning and renders the individual's reasoning more transparent. In effect, it allows the judge to reconstruct imaginatively the affective logic of the defendant's cultural world (3). The role of culture in forensic psychiatry becomes increasingly relevant in the case of refugees. The United States is among the countries that accept the largest numbers of refugees annually. People flee their countries for many reasons, including violence, armed conflicts, poverty, hunger, economical reasons, climate changes, and other humanitarian emergencies (4, 5). The terms "asylum-seeker" and "refugee" are not synonymous. With regard to the United States, asylum seekers are individuals who are inside the United States claiming to be refugees; however, their claims have not been evaluated, and no decision has been made about their status. Refugee status is used to describe those who are currently outside the United States and want to enter. Refugees must be of a certain nationality of priority or referred by a U.S. embassy, the United Nations Refugee Agency, or a nongovernmental organization. They should not be excludable on concerns listed in the Immigration and Nationality Act (e.g., health, security, or criminal concerns) (4, 5). Because the number of refugees is increasing, more demand is being placed on the role of mental health and medical services in the care of this population (5).

Besides continuous reactions to trauma, refugees face many problems concerning their basic needs even after migration to a new country, such as shelter, their living situation, and food. As a result, they can experience more psychological problems after migrating (6). Postmi-

gration stressors can originate from unemployment, acculturation, lack of opportunities, discrimination, and language inadequacy (7). The relationship between premigration stressors (e.g., refugee camps, trauma, torture, loss) and postmigration psycho-social struggles is an important dyad to consider in refugee mental health.

Regarding postmigration stressors, economic considerations take precedence. According to DeVoretz et al. (8), it takes newcomers an average of 7–10 years to achieve economic stability. This leads to a significant proportion of this population to fall into poverty (7). Cultural identity and acculturation are also important factors. Individuals who retain their own cultural identity while incorporating elements of the new culture are more likely to be successful in their adjustment than those who choose to assimilate completely to the new culture or who retreat to the familiar while rejecting the new or who abandon the familiar and at the same time reject the new (9). Individuals who do not speak the language of the hosting country and do not work have higher rates of depression (7). Lastly, having limited social support can contribute to postmigration stress, and the presence of long-term relationships has been found to be protective (7). As illustrated in the case example accompanying this article, adjusting refugees are especially vulnerable to exacerbations of mental illness (even though there is no consensus about this according to Beiser [7]).

The Role of Psychiatry in the Forensic Cases of Refugees and Asylum Seekers

Trauma is very common in asylum seekers and refugees. This population navigates repercussions of their traumas while being away from their homes and families and undergoing emotional turmoil. It has been suggested that they may

Case Example of a Resettled Refugee in the Criminal Justice System

"Mr. A" is a 19-year-old male Iraqi resettled refugee who was arrested for assault and battery against his mother. He had experienced and witnessed torture and trauma in Iraq. After leaving Iraq, he lived in a refugee camp in Syria for years. His father was politically executed years before his move to the United States. Encouraged by his society, he then assumed the "man of the house" role while growing up. His family consisted of his mother and three younger sisters. Coming to the United States was considerably stressful for him. This is especially because he had an accident right after migrating, which limited him physically, requiring months of physical rehabilitation, and limited his ability to attend school. To support the family, his mother started to work for the first time in her life, which was stressful for him. In a psychiatric evaluation, he complained about how his mother and sisters "do not respect" him as they should. He made the statement, "Because I am the man of the family." He described how his mother usually yells at him if he spends time on Facebook, which makes him feel "small." He also indicated that he was boiling with anger and sadness on the day he learned about the death of a close friend in the war. Additionally, he could not control his emotions when his mother started yelling at him for a trivial matter, and as a result, in a moment of rage, he pushed her to the wall and tried to choke her. She did not get hurt. The police were called, and he was booked, arraigned, and later mandated by the court to attend psychotherapy.

This patient's view of masculinity is culturally informed and reflects an Eastern point of view that expects (and mandates) respect to the man of the household. From the patient's cultural point of view, his act would not have required intervention of police in Iraq (unless serious damage was done). One formulation might speculate an unconscious desire to redeem his masculinity by showing aggression. A cross-cultural formulation should take into consideration the following points: pre- and postmigration stressors, physical limitations resulting in the inability to work or study, loss of the "man" role in the family, and evaluation of possible posttraumatic stress disorder. This formulation is not intended to neutralize the individual's actions and reduce his culpability; however, it will allow the judge to better understand the case and make a well-informed decision.

be experiencing ongoing trauma even as they seek the land of refuge (5). In working with resettled refugees, the forensic psychiatrist can play two roles: 1) one role involving performing initial forensic immigration evaluations or 2) a later role when a resettled refugee has committed a crime and is being evaluated psychiatrically to assess the impact of the mental illness on his or her competency and/or criminal behavior.

Initial Role: Forensic Psychiatry Immigration Evaluations

Refugees have to prove to the immigration/legal officers that they were persecuted in their countries of origin and provide a consistent and detailed account of their trauma in order for their asylum cases to be approved. Prabhu and Baranoski (5) suggested that psychiatrists can be involved in different roles

early on in the initial immigration process. One can act in an educating/liaison role with the immigration attorneys, in which the psychiatrist can provide education about the effects of trauma on the individual's presentation (e.g., the ability to give a detailed account, the effect of fear and hypervigilance in strict and structured interviews, etc.). Another aspect involves assessing the individual and providing advice to the immigration legal team if a mental illness is suspected to influence the person's ability to provide testimony and participate in the legal process. Additionally, a forensic psychiatric evaluation can be utilized to assess potential malingering (e.g., manufacturing a history of trauma in order to be granted refugee status) (5). Some refugees are quite resilient and do not exhibit signs of mental illness (7). In this context, psychiatric evaluation can help

attorneys understand the nature of resilience in certain individuals that helped them to survive and to present themselves as "better than expected." This is important given the inherent assumption from many attorneys that trauma *must* manifest psychiatrically, which may lead to suspicion of malingering when dealing with resilient individuals.

Later Role: Forensic Psychiatry Criminal Evaluations

Another potential role for forensic psychiatrists is in the evaluation of resettled refugees who have committed a crime. Given the complicated psychosocio-cultural nature of these cases, forensic psychiatrists might be asked to evaluate and give a professional opinion regarding the assessment of culpability. The literature on this unique role of psychiatrists is sparse. In general, an adequate cross-cultural psychiatric evaluation should be sensitive to language barriers and demonstrate familiarity with work with interpreters, culture-specific connotations and phrases, culturally sensitive verbal and nonverbal communications, cultural traditions and norms, commonly abused psychoactive substances in certain cultures, and cultural transference and countertransference (10), as well as provide family involvement, issues of privacy, and the ability to obtain an accurate socio-cultural history (11).

In addition to these considerations, a cross-cultural psychiatrist should be sensitive to certain specific aspects of the interview with a resettled refugee. These include the challenges of new-onset acculturation, adjustments to the new society, the psychological stressors of the resettlement process, and the effects of trauma. Evaluating psychiatrists are encouraged to be aware of their own reactions to cases as well, such as shock and disbelief, feeling burdened by the case, stereotypes, judgment, and analyzing a case based on a preconceived understanding of the patient's culture (5).

Conclusions

Refugee mental health is a growing area of interest given the increasing number of

people worldwide who are facing resettlement annually. Refugees have to navigate a unique matrix of psycho-social stressors, including trauma and torture, life at refugee camps, the immigration process, and finally resettlement. Most agree that the misery of refugees does not end with their resettlement. Issues of acculturation, language inadequacy, and poverty contribute to worsening stress of resettled refugees. Forensic psychiatry is playing an increasingly important role in the initial immigration process and in performing psychiatric evaluations of resettled refugees in criminal proceedings. This patient population requires more attention from psychiatrists and psychiatric organizations to promote increased awareness and to implement best practice guidelines for forensic evaluation.

Dr. Jefe-Bahloul is a fellow in Psychosomatic Medicine, Department of Psychiatry, Yale School of Medicine, New Haven, Conn.

References

1. Kirmayer LJ, Rousseau C, Lashley M: The place of culture in forensic psychiatry. *J Am Acad Psychiatry Law* 2007; 35: 98–102
2. Boehnlein JK, Schaefer MN, Bloom JD: Cultural considerations in the criminal law: the sentencing process. *J Am Acad Psychiatry Law* 2005; 33:335–341
3. Kirmayer LJ: Empathy and alterity in cultural psychiatry. *Ethos* 2008; 36:457–474
4. Keten A, Akçan R, Karacaoğlu E, Odabaşı AB, Tümer AR: Medical forensic examination of detained immigrants: Is the Istanbul Protocol followed? *Med Sci Law* 2013; 53:40–44
5. Prabhu M, Baranoski M: Forensic mental health professionals in the immigration process. *Psychiatr Clin North Am* 2012; 35:929–946
6. Söndergaard HP, Ekblad S, Theorell T: Screening for post-traumatic stress disorder among refugees in Stockholm. *Nord J Psychiatry* 2003; 57:185–189
7. Beiser M: Resettling refugees and safeguarding their mental health: lessons learned from the Canadian Refugee Resettlement Project. *Transcult Psychiatry* 2009; 46:539–583
8. DeVoretz DJ, Pivnenko S, Beiser M: The economic experiences of refugees in Canada, in *Homeland Wanted: Interdisciplinary Perspective on Refugee Settlement in the West*. Edited by Waxman P and Colic-Peisker V. New York, Nova Science Publishers, 2004
9. Beiser M, Collomb H: Mastering change: epidemiological and case studies in Senegal, West Africa. *Am J Psychiatry* 1981; 138:445–449
10. Spiegel JP: Cultural aspects of transference and countertransference revisited. *J Am Acad Psychoanal* 1976; 4:447–467
11. Westmeyer JJ: Cross-cultural psychiatric assessment, in *Culture, Ethnicity, and Mental Illness*. Edited by Gaw AC. Washington, DC, American Psychiatric Publishing, 1993, pp 125–144

PSYCHIATRIC SERVICES

Free Online Subscription to *Psychiatric Services* for APA Resident-Fellow Members (RFMs)!

American Psychiatric Association Resident-Fellow Members (RFMs) can receive a free online subscription to *Psychiatric Services*.

Simply visit ps.psychiatryonline.org for full-text access to all of the content of APA's highly ranked, peer-reviewed monthly journal. *Psychiatric Services* focuses on service delivery in organized systems of care, evolving best practices, and federal and state policies that affect the care of people with mental illnesses.

Please visit ps.psychiatryonline.org and log in with your American Psychiatric Association username and password.

Psychiatry residents who are not currently APA Resident-Fellow Members should consider membership in the American Psychiatric Association. The benefits provided to residents are an example of how the APA serves the needs of its members throughout their careers. The low introductory dues APA extends to RFMs are even waived for the first year. Please visit <http://www.psych.org/joinapa> for more information.



Email: appi@psych.org
Phone: 1-800-368-5777
The First and Last Word in Psychiatry

ps.psychiatryonline.org



AH1409A

A Review of Psychiatry in Tanzania

Sarah C. Cook, M.B., B.Ch., B.A.O.

Tanzania is an East African country bordered by Kenya, Mozambique, Malawi, Zambia, the Democratic Republic of Congo, Burundi, Rwanda, and Uganda. Tanzania has a population of 48 million people, yet only 13–18 psychiatrists are available to provide mental health care (1). Most of the psychiatric care in Tanzania is carried out by trained nurses and mental health clinicians who face limited treatment options, understaffing, and few supervision and continuing education opportunities. The present review outlines the current psychiatric system in Tanzania, as well as the needs and issues facing psychiatry in this country, and offers potential next steps and ideas for future research to improve psychiatric care.

History and the Current System

The first Tanzanian psychiatric hospitals were established by colonists, in the 1890s by the Germans and in 1935 by the British. Regional psychiatric offices were planned throughout the 1960s and 1970s, but there was never a formal government plan to establish mental health care (2). In the late 1970s, the government formed the Tanzanian National Mental Health Programme in conjunction with the World Health Organization (WHO) and DANIDA (Danish International Development Agency), a Danish nongovernmental organization providing financial support (3). It was decided that primary health care workers would provide psychiatric care in the communities. In doing so, primary health care workers would recognize psychiatric emergencies and treat appropriately with medication or refer, support families, and follow up with chronically ill patients. The Tanzanian National Mental Health Programme aimed to decentralize psychiatric care into a tiered system, with the intent of providing wider coverage of psychiatric care (3).

As part of this tiered system, patients are seen at the primary care level for initial assessment, management of acute symp-

toms, and follow-up. Primary health care workers at this level are medical aides and clinical officers with 3 years of postsecondary school training in general medical illnesses and conditions. If necessary, they could refer to a regional health center, staffed with clinical officers and nurses, for diagnostic assessment and long-term treatment. There are about three to four regional centers per district, each having two to four beds per 120,000–150,000 people for overnight observation. Finally, the most severely ill patients are referred from regional health centers to a district hospital if necessary (3). Lack of funding for the Tanzanian National Mental Health Programme made building psychiatric care into the primary medical care system unsustainable for several years until 2003, when psychiatric care was included in the national health sector strategic plan. This led to a resurgence of incorporating mental health care into general medical practice at the community level. Unfortunately, ongoing low resources for health care as a whole continue to limit psychiatric care in Tanzania.

Currently, Tanzania has one of the lowest rates of mental health outpatient facilities, at 0.3 per 100,000 persons. Africa as a whole has 0.6 outpatient facilities per 100,000 (1). Individuals suffering from psychiatric illnesses are frequently cared for by their families and local mental health care workers, who see patients on an outpatient basis. Patients who require hospitalization are generally sent to a district hospital and admitted to beds on the general medical wards as recommended by WHO guidelines (4). There are inpatient psychiatric facilities in select urban centers, including Mawenzi and Dar es Salaam. Severe, chronically ill patients who are violent may be sent to a forensic psychiatric unit in Dodoma. There is also a private mission-run psychiatric inpatient facility in Lutindi that can accommodate patients needing long-term inpatient care (5). At the time this review was written, there were no published data to our knowledge regarding patients who

do not have access to psychiatric treatment. Per clinicians in Tanzania, patients with mental illness are generally accepted by the community. However, if they become threatening or violent, they are arrested and end up in jail, where general medical care of any type is scarce (6).

Challenges for Care

There is a dearth of research in Tanzania regarding prevalence and incidence of psychiatric disorders and treatment. The limited data available indicate that the most common psychiatric disorders are depression and anxiety (250–400 per 10,000), followed by schizophrenia (50 per 10,000) and bipolar disorder (50 per 10,000) (7). Limitations of the data include accuracy of diagnoses, given the extremely low number of psychiatrists available to provide supervision to those undertaking clinical interviews or scales to make a diagnosis. In one study, the investigators reported that patients with mood disorders may be misdiagnosed with primary psychotic disorders if they exhibit changes in behavior or language (4).

A major challenge in providing psychiatric services in Tanzania is the lack of graduate-level trained professionals. The idea to decentralize psychiatric care helped to expand services to a greater number of patients, but few resources were made available for medical school education and development of postgraduate-level psychiatric training, although more psychiatrists are needed to train and support local clinicians. As of 2009, Tanzania has produced a total of 25 psychiatrists. Among these, one works in the public sector, two in private facilities, nine abroad, and two are retired (7). Most patients receive care from clinical medical officers, who complete secondary school plus 3 years of training, and registered nurses, who finish 3–4 years of general nurse training and an additional mental health module. Medical students in Tanzania generally complete a 3- to 4-week psychiatric rotation, which may or may

not include interaction and training with a psychiatrist (personal communication with Boniface Kisi, Arusha Mental Health Trust, March 25 and 31, 2014).

Residents may have opportunities to gain further psychiatric training abroad. Unfortunately, there is a risk that medical students, residents, and psychiatrists who train abroad will not return to Tanzania to practice. Currently, there is poor reimbursement for psychiatric care. Salaries for psychiatrists are lower than that of other medical specialties in Tanzania, in addition to overwhelming work conditions in the public sector. Retaining psychiatric professionals remains a great challenge given the limited incentives and opportunities offered.

Access to medications is another challenge facing psychiatric care in Tanzania. According to clinicians at Arusha Mental Health Trust, the government imports two types of psychotropics, antipsychotics and antidepressants, and only one to two choices in each class. Antipsychotics available include haloperidol and chlorpromazine. The antidepressant available is amitriptyline. Diphenhydramine is available on a limited basis for dystonic reactions and as an anxiolytic and sedative. Psychiatric clinicians report that the medication supply is erratic. At the time this review was written, the Arusha area, a large urban district, had not received a medication supply from the government for 4 months (personal communication with Boniface Kisi and Lisbeth Mhambo, Arusha Mental Health Trust, March 25 and 31, 2014). Patients in this circumstance are then provided with a prescription to take to private pharmacies, but they often cannot afford to pay out-of-pocket, or they cannot afford the transportation to the pharmacy that has the medication(s) available. This undoubtedly results in patients' relapsing, worsening overall outcomes, increased stress on families, and increased burden on an already fragile community mental health system.

Some local mental health facilities offer psychotherapy, including cognitive-behavioral therapy, group psychotherapy, and support groups for families of patients with psychotic disorders. Challenges include appropriate supervision, facility space, funds for transportation, and staff available to lead sessions. Clinicians in Tanzania note that psychotherapy has become a mainstay of treatment provided because it is effective, patients do not have to rely on medication supplies, and many patients are more comfortable discussing their symptoms rather than taking medications. Research indicates that traditional healers, for whom there is a 1:25 ratio compared with a 1:20,000 ratio for doctors, could play a pivotal role in offering supportive therapy, a role they already perform in many cases (7). One study suggested that individuals with psychiatric conditions sought traditional healers more frequently than those with physical medical illness (6). Community mental health centers are also focusing efforts on substance use disorders, particularly alcohol use disorder, since the number of patients seen with alcoholism has increased dramatically over the last several years. Clinicians in Tanzania report that in addition to greater variety of medications and more inpatient psychiatric beds, a detoxification center is a much needed resource.

Conclusions

Psychiatry in Tanzania, while facing challenges, presents opportunities for the psychiatric community to engage in education, clinical experience, research, and international cooperation. Psychiatrists-in-training could participate in research opportunities that would not only provide needed data but also much needed clinical care. Increasing education and clinical rotation exchanges among the international psychiatric community would provide invaluable experience and reciprocal learning to all psychiatrists involved. More research is needed regarding prevalence and incidence of psychiatric

disorders, response to medications and psychotherapy, management of substance use disorders and personality disorders, medical education, and effectiveness of mental health training programs currently in use. Although language is certainly a barrier in treating patients directly, it is still very possible to work directly with Tanzanian psychiatric clinicians to improve care and promote awareness of psychiatry as a field throughout the globe. Western clinicians could greatly benefit from learning about models of treatment aimed to serve a large population using extremely restricted resources.

Dr. Cook is a third-year resident in the Department of Psychiatry, Emory University, Atlanta.

The author thanks Dr. Wendy Baer, Dr. Teresa Cone, Dr. Boadie Dunlop, Boniface Kisi, Lisbeth Mhambo, Dr. Kazare Nyakyoma, Dr. Misty Richards, Dr. Ann Schwartz, and Dr. Martha Ward.

References

1. Commonwealth Health Online: www.commonwealthhealth.org/africa
2. Njenga F: Focus on psychiatry in East Africa. *Brit J Psychiatry* 2002; 181:354–359
3. Schulsinger F, Jablensky A: The National Mental Health Programme in the United Republic of Tanzania: a report from WHO and DANIDA. *Acta Psych Scand Supp* 1991; 364:1–132
4. Mbatia J, Shah A, Jenkins R: Knowledge, attitudes and practice pertaining to depression among primary healthcare workers in Tanzania. *Int J Ment Health Syst* 2009; 3:5
5. Korste R: Challenges in mental health care in Tanzania: what can elearning add? 2011. in2mentalhealth.com
6. Mbatia J, Jenkins R: Development of mental health policy and system in Tanzania: an integrative approach to achieve equity. *Psychiatr Serv* 2010; 61:1028–1030
7. Ngema M: Common mental disorders among those attending primary health clinics and traditional healers in urban Tanzania. *Brit J Psychiatry* 2003; 183: 349–355

The Transformation of Mental Health Culture in India

Suni Jani, M.D., M.P.H.

Invisible to the average pedestrian while running in between rickshaws in the streets of Mumbai, a disheveled elderly man laughs to himself. He left his village many years ago, exhausted from being locked away from his family for reasons he cannot remember. His face is caked in dirt; his clothes are an amalgamation of faded and discolored cloth. He is a neighborhood relic to some shop owners and a city nuisance to passing housewives. In the hot winter months, he often awakens in a dilapidated room lit with slivers of sun through barred windows. Occasionally, he is in jail for a crime he did not know he committed. One day he passes away, and it is uncertain whether he took his own life in a moment the shattered perceptual experience of his life ceased to connect into meaning altogether or if starvation came first. His body is collected for mass cremation. The details of his death certificate leave the pathologist as perplexed as the many psychiatrists who saw him in life. His diagnosis was always unclear because he never saw a psychiatrist consistently enough to know for sure. He could not afford medication or a community clinic visit. His psychiatrists often anticipated his arrival on an inpatient unit and had little to say about his past. No one *really* knew this patient. His disposition, like many patients with mental illness in India, remained a constant unknown with a poor prognosis.

From the moment they are born, numerous individuals with mental illness worldwide face a life similar to this one, though each country faces its own unique obstacles based on its cultural history, attitudes about health care, and legislative practices. India faces challenges in funding and stigma, but there is also hope through paradigm shifts in health care delivery and cultural attitudes. These shifts can be facilitated through a combination of national legislation and community organization.

Many inhabitants of rural regions of India believe erratic behavior caused by mental illness is a punishment of sins

committed in a previous life. The therapy for this is often provided by a faith healer through beatings, chanting spells, and chaining up the patient (1). Neuropsychiatric disorders in India are estimated to contribute to 11.6% of the global burden of disease (2), with suicide as the second highest cause of death in the country among those between the ages of 15 and 29 years. Suicides in India most often occur by hanging, self-immolation, and drinking pesticide. Increase in suicides may be a result of the urbanization of the country, creating a change in the Indian family dynamic as more individuals leave their support system in rural regions and move to socially isolated cities (3). India's rising population of 1.2 billion people (4) has one psychiatrist for every 300,000 people (2), compared with the United States, which has 50,000 practicing psychiatrists in a smaller nation with many underserved regions (1). According to the World Health Organization (WHO), the total expenditure on health as a percentage of gross domestic product in India is 4.16%, out of which 0.06% is dedicated to mental health services (2).

India's National Mental Health Programme has been implemented since 1982 and funds the District Mental Health Programme to provide community mental health services by integrating them with primary care services. The Indian government is proposing an increase in its mental health budget for psychiatric education and mental health awareness in light of the country's increasing suicide rates (2). India's Mental Health Care Bill of 2013, currently awaiting parliamentary action, aims to mandate necessary interventions by ensuring that physicians inform patients of their rights when committing them without their consent, by decriminalizing suicide, by providing patient confidentiality, by forbidding ECT without anesthesia, and by funding the formation of halfway homes and shelters (5).

Although laws appear to be changing rapidly, the cultural changes in India will likely take more time. In May 2013,

WHO met for its 66th World Health Assembly in Geneva, with a landmark agenda to address international barriers to mental health treatment (6). Good mental health enables people to realize their potential, cope with normal life stressors, work productively, and contribute to their communities. The cumulative global impact of mental disorders in terms of lost economic output is estimated to be \$16.3 million (U.S.) between 2011 and 2030, since mental disorders frequently lead individuals, as well as their families, into poverty, homelessness, and inappropriate incarceration more than what is found in the general population (6). These psychosocial factors exacerbate the vulnerability of individuals already suffering from the stigma of mental illness. Stigma is exhibited in a wide spectrum of behaviors, from limited access to care to violation of human rights. Many individuals with mental illness are denied social, economic, and civil rights, including a right to exercise decision making in their own treatment or to receive the highest attainable standard of health. In some countries, individuals with mental illness are also denied political rights, such as the right to vote or participate in public life. Within their own cultures, they also face reproductive limitations or the social acceptance to found a family (6). These are daunting obstacles WHO strives to address in the Mental Health Action Plan for 2013 through 2020. The Mental Health Action Plan suggests that nations implement more effective leadership for mental health, provide integrated mental health and social care services in community-based settings, implement strategies for promotion and prevention of mental illness, and increase research (6). Mental illness is often overlooked as a public health issue in favor of instantaneous changes for more immediate life-threatening diseases. However, their impact on an individual can be a contagion to families, communities, and nations. The issues addressed by WHO in their epidemiological findings and their suggestions for nations are a call for change to individuals

who provide mental health care to educate and treat in the face of stigma.

Overcoming stigma remains one of the largest systemic and individual barriers to fill the treatment gap for mental health care in India. Stigma cannot be legislated against, and the vastness of Indian states, languages, cultures, beliefs, and political views often fragments many united movements for health awareness. However, the personal experiences of clinicians, patients, and families witnessing the severe morbidity and mortality of untreated mental illness have prompted numerous grassroots and nonprofit foundations throughout India to influence a culture of mental health care acceptance. These microcosmic movements fuel discussions and desires to end the presence of inadequately managed hospitals, improve access to mental health care, increase physician support, provide affordable and sustainable mental health programs, and implement a methodology for assessing mental health needs in a culturally sensitive manner. Inspired by these efforts, I sought to understand the limitations of providing transcultural psychiatric aid through my own foray into the system, catalyzing the creation of a 501(c)(3) certified organization called Global Health Linkages, Inc., a nonprofit dedicated to creating sustainable mental health solutions for underserved communities. An opportunity to help the Oshiwara Municipal Maternity Hospital in Mumbai arrived through the Humanist Society, a group of philanthropists based in Mumbai. The Humanist Society wanted to enhance existing volunteer health services for the Oshiwara Hospital. The Humanist Society physician volunteers would come to the hospital during their breaks to teach yoga, nutrition, and basic health education in the hospital's main hallway filled with women, who were patients from the

nearby Dharavi slums, dressed in assorted burqas, hijabs, and saris. Together, we revitalized psychoeducation planning and fundraising for sustainable new interventions, such as new rubber gloves and bananas (as a vitamin supplementation) for the hospital (7). Experiencing a world need firsthand, creating my own project, designing each element, explaining it, and applying for funding provided a vehicle for outreach. Global Health Linkages volunteers collected educational materials, such as notebooks, pens, and coloring materials, for the orphanage near the Oshiwara Municipal Maternity Hospital called the Nehru Nagar Community Center (7). A few months later, a professor of Gujarati literature in Ahmedabad approached us requesting assistance in the creation of a community shelter and vocational services for women who survived elder neglect and domestic violence (7). Additional needs of communities came to light with Koshish, a grassroots organization founded by dedicated and compassionate families from the city of Vadodara who are committed to creating evidence-based individualized educational programs, vocational rehabilitation, occupational therapy, and after school programs to optimize opportunities for children with intellectual disabilities (7).

A tremendous amount of work remains for the metamorphoses of the mental health care system not only in India but worldwide. The global recognition for change is reflected in legislative action and international aid, but the process begins at a microcosmic level through research, education, and compassion demonstrated by local and global psychiatrists. The challenge to change is for all readers to utilize their knowledge and resources to improve access, management, training, evaluation, and sustainability of mental health programs. Through this work and

opportunities to collaborate with other trainees, I have learned that participating in global outreach efforts and contributing to international mental health care did not require a nonprofit or jet-setting lifestyle, but empathy, compassion, and a willingness to seek out the underserved.

Dr. Jani is a second-year resident in the Menninger Department of Psychiatry and Behavioral Sciences, Baylor College of Medicine, Houston.

The author thanks the many individuals and organizations that have partnered with Global Health Linkages, Inc. over the years. The author also acknowledges Drs. Andrea Stolar, John Coverdale, James Lomax, and Misty Richards for their encouragement, inspiration, advice, and meaningful suggestions, as well as Drs. Niranjana and Sushma Jani.

References

1. Magnier M: India battles misconceptions on mental illness. Los Angeles Times, July 5, 2013
2. World Health Organization: India Mental Health Atlas 2011. World Health Organization, Geneva, 2011
3. Patel V, Ramasundarahettige C, Vijayakumar L, Thakur JS, Gajalakshmi V, Gururaj G, Suraweera W, Jha P: Suicide mortality in India: a nationally representative survey. Lancet 2012; 379:2343–2351
4. World Bank Group: Population (Total). <http://data.worldbank.org/indicator/SP.POP.TOTL> (Accessed March 9, 2014)
5. Kala A: Time to face new realities: mental health care bill-2013. Indian J Psychiatry 2013; 55:216–219
6. World Health Organization: Mental Health Action Plan 2013–2020. Geneva, World Health Organization, 2013
7. Jani SN: Global Health Linkages, Inc. www.globalhealthlinkages.org (Accessed March 9, 2014)

...From the Page to the Stage



Psychopharmacological Treatment of Depression and Anxiety

Clinical Guidance at the APA Annual Meeting

- ◆ Antidepressant Efficacy of Ketamine in Treatment-Resistant Major Depression
Sanjay Matthew, M.D., Baylor College of Medicine
- ◆ Evaluation of the FDA Warning Against Prescribing Citalopram at Doses Exceeding 40 mg
Kara Zivin, M.S., Ph.D., University of Michigan
- ◆ Antidepressant Use in Bipolar Disorders
Eduard Vieta, M.D., Ph.D., University of Barcelona
- ◆ Augmentation and Switch Strategies for Refractory Social Anxiety Disorder
Mark Pollack, M.D., Rush University Medical Center

Moderated by Robert Freedman, M.D., Editor—*The American Journal of Psychiatry*

American Psychiatric Association Annual Meeting

Monday, May 5 | 9 a.m.–12 p.m. | Javits Convention Center, Room 1E13, Level 1



TEST YOUR KNOWLEDGE

In preparation for the PRITE and ABPN Board examinations, test your knowledge with the following questions. (answers will appear in the next issue)

This month's questions are courtesy of David Hsu, M.D., a fellow in geriatric psychiatry at Massachusetts General Hospital/McLean/Harvard, Boston, and Associate Editor of the Residents' Journal.

Question #1

Finger tapping is a standardized test for which of the following?

- A. Parkinsonism
- B. Executive function
- C. Visuospatial reasoning
- D. Coordination
- E. Concentration

Question #2

Signs of catatonia include which of the following?

- A. Stupor or nonreaction to painful stimuli
- B. Waxy flexibility
- C. Echolalia
- D. Gegenhalten
- E. All of the above

ANSWERS TO APRIL QUESTIONS

Question #1

Answer: A. There were more psychiatrists than neurologists in the inception of the American Board of Psychiatry and Neurology (ABPN). According to Marc H. Hollander, M.D., Director of the Board from 1972 to 1980, this was a major dispute early in the Board's creation. Hollander indicated that there was an issue regarding which specialty would be dominant. The first president of the Board was Dr. H. Douglas Singer. From 1934 to 2009, there were more ABPN directors who were psychiatrists than neurologists, 58 compared with 33. An additional 44 were certified in both specialties.

Reference

1. Aminoff MJ, Faulkner LR: The American Board of Psychiatry and Neurology: Looking Back and Moving Ahead. Washington, DC, American Psychiatric Publishing, 2012, pp 18–21

Question #2

Answer: E. All of the above

For those trainees who do not know the history of the APA, they should read Dr. Barton's classic text (1). As we gear up for another Annual Meeting, let us remember that the APA is the first national medical organization in the United States, older than the American Medical Association.

Reference

1. Barton WE: The History and Influence of the American Psychiatric Association. Washington, DC, American Psychiatric Publishing, 1987, pp 31–39

We are currently seeking residents who are interested in submitting Board-style questions to appear in the Test Your Knowledge feature. Selected residents will receive acknowledgment in the issue in which their questions are featured.

Submissions should include the following:

1. Two to three Board review-style questions with four to five answer choices.
 2. Answers should be complete and include detailed explanations with references from pertinent peer-reviewed journals, textbooks, or reference manuals.
- *Please direct all inquiries and submissions to Dr. Hsu: davidhsu222@gmail.com.

Author Information for *The Residents' Journal* Submissions

Editor-in-Chief

Arshya Vahabzadeh, M.D.
(MGH/Harvard)

Deputy Editor

Misty Richards, M.D., M.S.
(UCLA)

Associate Editor

David Hsu, M.D.
(McLean/Harvard)

The Residents' Journal accepts manuscripts authored by medical students, resident physicians, and fellows; manuscripts authored by members of faculty cannot be accepted. To submit a manuscript, please visit <http://mc.manuscriptcentral.com/appi-ajp>, and select "Residents" in the manuscript type field.

- 1. Commentary:** Generally includes descriptions of recent events, opinion pieces, or narratives. Limited to 500 words and five references.
- 2. Treatment in Psychiatry:** This article type begins with a brief, common clinical vignette and involves a description of the evaluation and management of a clinical scenario that house officers frequently encounter. This article type should also include 2-4 multiple choice questions based on the article's content. Limited to 1,500 words, 15 references, and one figure.
- 3. Clinical Case Conference:** A presentation and discussion of an unusual clinical event. Limited to 1,250 words, 10 references, and one figure.
- 4. Original Research:** Reports of novel observations and research. Limited to 1,250 words, 10 references, and two figures.
- 5. Review Article:** A clinically relevant review focused on educating the resident physician. Limited to 1,500 words, 20 references, and one figure.
- 6. Letters to the Editor:** Limited to 250 words (including 3 references) and three authors. Comments on articles published in *The Residents' Journal* will be considered for publication if received within 1 month of publication of the original article.
- 7. Book Review:** Limited to 500 words and 3 references.

Abstracts: Articles should not include an abstract.

Upcoming Themes

Please note that we will consider articles outside of the theme.

Addiction Psychiatry

If you have a submission related to this theme, contact the Section Editor, Juliet Muzere, D.O. (jmuzere@gmail.com).

Psychopharmacology and Therapeutics

If you have a submission related to this theme, contact the Section Editor, Rajiv Radhakrishnan, M.B.B.S., M.D. (rajivr79@yahoo.com).