An Analysis of Convergence of Global Mental Health and Non-Communicable Disease Frameworks: Separate is not Equal

Kerim M. Munir[1]

[1]MD, MPH, DSc, Developmental Medicine Center, Boston Children's Hospital, Departments of Psychiatry and Pediatrics, Harvard Medical School, Boston, USA

Address reprint requests to / Yazışma adresi: Kerim M. Munir, MD, MPH, DSc
Developmental Medicine Center, 300 Longwood Avenue, Boston Children's Hospital, Departments of Psychiatry and Pediatrics, Harvard Medical School
Boston, MA 02115, USA

Phone / Telefon: +1-617-355-7166, Fax / Faks: +1-617-730-0252 E-mail address / Elektronik posta adresi: kerim.munir@childrens.harvard.edu

Emergence of the Non-communicable Diseases

Non-communicable Diseases (NCDs) are non-transmissible health conditions distinguished by non-infectious causes and long term health effects that are also amenable to preventive interventions. The NCDs therefore include all health conditions, acute and chronic, that are not caused by infections (1). It has been estimated that the NCDs currently represent the cause of more than two-thirds of global deaths, by far the largest contribution worldwide. Both personal lifestyle and environmental influences (social, behavioral, and economic determinants) are contributors of risk (2). Commonly cited risk factors include obesity, high blood pressure, high cholesterol, tobacco use, and excess alcohol intake. It has been postulated that up to 80% of well-known NCDs such as heart and cerebrovascular diseases and type-2 diabetes can be prevented, same being true for 40% of cancers.

The World Health Organization (WHO) has recognized that interventions targeting the predisposing risk factors of NCDs could have a significant impact on reducing the Global Burden of Disease (GBD) (2). Therefore, for over a decade the WHO has increasingly focused on NCDs as a major target to reduce excess and preventable mortality rates worldwide. In this regard, the World Health Assembly resolution (WHA 67.12) requested the Director-General of WHO to "prepare, for the consideration of the Sixty-eighth World Health Assembly, in consultation with Member States, United Nations organizations, and other relevant stakeholders as appropriate, and within existing resources, a Framework for Country Action, for adaptation to different contexts, taking into account the Helsinki Statement on Health in All Policies, aimed at supporting national efforts to improve health, ensure health protection, health equity and health systems functioning, including through action across sectors on determinants of health and risk factors of non-communicable diseases, based on best available knowledge and evidence".

The remarkable WHO efforts have focused on improvement of healthy dietary choices, increased physical activity, prevention of tobacco use (through awareness campaigns, increased taxes on tobacco

products, and banning of smoking in public spaces), campaigns for moderation of alcohol intake (including adherence to laws regulating drinking and driving), and recommendations for improved road engineering to prevent accidents, as well as motor vehicle safety measures to lessen injuries and fatalities. On 29 October 2014, the WHO Secretariat published a First Discussion Paper for a web-based consultation open for comment until 31 December 2014. By 16 February 2015, the WHO Secretariat published a Second Discussion Paper and further invited commentary and consultative process from member states, UN and inter-governmental organizations, relevant NGOs, as well as interested private sector entities.

In providing an updated situation analysis including governmental responses to NCDs involving 194 countries, the WHO profiles in 2014 had however shown uneven progress. A key highlight of the framework, to date, has been the pronounced reduction of tobacco demand in Turkey, the first country to attain the highest standard in all of the WHO demand-reduction measures for reducing tobacco prevalence. Turkey achieved this result by increasing the size of health-warning labels on cigarette packaging, instituting national tobacco taxes (covering eighty percent of the total retail price), and beginning systematic enforcement campaign of a total ban on tobacco advertising, promotion, and sponsorship. The result has been a 13.4% relative decline in the smoking rate in the country with a long tradition of tobacco production and use. The WHO paper praised the Turkish government's "sustained political commitment to tobacco control, exemplifying collaboration between government, WHO and other international health organizations, and civil society," a rare accolade from an international organization for Turkey (3). In the 35-page paper there was no specific mention however of mental disorders, although it has been assumed that mental and substance use disorders, at least as related to alcohol and tobacco are part of the NCD framework. Nevertheless, akin to the legal dictum separate and equal there was clearly a differential approaches to mental disorders and other non-communicable disorders as envisioned in the NCD framework. This distinction is perhaps exemplified by

the need for the WHO to form the Non-communicable Diseases and Mental Health Cluster (NMH) "to provide leadership and the evidence base for international action on surveillance, prevention and control of non-communicable diseases, mental health disorders, malnutrition, violence and injuries, and disabilities". This impact statement can perhaps be revised to read: "to provide leadership and the evidence base for international action on surveillance, prevention and control of all non-communicable diseases, *including* mental health disorders, malnutrition, violence and injuries, and disabilities". Nevertheless the formation of the NMH Cluster with distinct acknowledgment of mental disorders is a major step forward in addressing their specific risk factors and determinants and for improving the mental health care and rehabilitation services.

Relevance of the NCD framework for Global Mental Health

In addressing the question of a unified approach to Global Mental Health and NCDs it is best to examine two preceding WHO programs, namely, the Global Burden of Disease (GBD) Study and the Mental Health Global Action Program (mhGAP). The GBD Study used the Disability-Adjusted-Life-Years (DALY), a time-based metric that combines years of life lost due to premature mortality and years of life lost due to time lived in states of less than full health to estimate disease burdens. The findings of the GBD Study emphasized that mental disorders accounted, on average, 37% of healthy years lost from disease (4), and are a leading cause of disability worldwide (5). The disorder severity was associated with service use, yet service availability was noted to be directly proportional to a given country's Gross Domestic Product (4). The ensuing mhGAP program launched by the WHO Department of Mental Health and Substance Abuse, therefore followed on the coat-tails of the GBD Study to develop consensus that mental, neurological, and substance use disorders were highly prevalent across all world regions, communities as well as all age groups, representing 14% of the GBD. The mhGAP identified that up to 75%

of people living in many resource-poor regions such as Low and Middle Income Countries (LMICs) had no meaningful access to mental and substance use treatment. With a specific mandate for LMICs, the mhGAP aimed at "scaling up" services for mental, neurological and substance use disorders worldwide. The goals of mhGAP included improvement of care, psychosocial assistance, and medication availability targeting such major disorders as depression, schizophrenia and suicide, among others (6,7).

As in the case of the NCD framework, the mhGAP approach was also unevenly applied across disorders and within LMIC populations that had an overrepresentation of youthful populations. Initially childhood mental and neurodevelopmental disorders was not a cornerstone of the program. For example, autism spectrum disorder was viewed as relatively rare to warrant worldwide attention (8), in particular given the WHO's severe budgetary constraints on mental and substance use disorders. Although this stance changed later, one can argue that there were ample examples of other disabling intellectual developmental disorders, associated with deficient antenatal and postnatal care, poor nutrition, as well as social and economic disparities with which WHO ought to have had a major interest, and lack of emphasis on neurodevelopmental disorders could therefore be seen as an important omission.

The differential emphasis on children and neurodevelopment may in part reflect the sheer unavailability of mental health workforce in the LMICs to address complex problems that inevitably involve inputs from various allied disciplines such as child psychiatry, pediatrics, neurology, clinical psychology, special education and school counseling, speech and language pathology, audiology, occupational therapy and physical therapy, to list but some. A pertinent and enduring problem has been the "dissociation" of Early Childhood Development (ECD) framework from Global Mental Health. For example, in closely embracing ECD, UNICEF reports have always alluded to mental health under the terminology "psychosocial", fearing that the reference to mental health may indeed further stigmatize children affected by adversity and disaster. As in

Shakespeare's Romeo and Juliet, this is perhaps a case of "a rose by any other name would smell as sweet" to gain better acceptability in attracting donations. Given the high level of comorbidity with mental disorders among children exposed to such adverse circumstances, as well as among those children with delays in acquisition of language and cognitive skills, there ought to be no alarm in using a mental health label. Indeed children with mental and neurodevelopmental conditions have an important legacy of facing a unique fate, especially in the LMICs; kept behind at home, assigned to institutions, with no or cursory access to educational opportunities that otherwise have a life transforming impact on their lives. Stigmatization of mental health issues is therefore a direct threat to human health across the lifespan.

Despite the ensuing challenges, the mhGAP has been a highly successful WHO endeavor in providing much needed resources that were made available to governments, intergovernmental organizations as well as NGOs in the LMIC contexts. Another important and evolving offshoot of mhGAP has been as a stimulus for the emergence of the Movement for Global Mental Health (MGMH) began with a call for action in the first Lancet series in 2007 (6). One may also convincingly argue that the mhGAP program help spur the development of the Fogarty International Center and the National Institutes of Mental Health (NIMH) collaborations with the Grand Challenges Canada Mental Health Innovations Network (MHIN). This period has also seen the integration of Global Mental Health within the NIMH Office for Research on Disparities and Global Mental Health. The Grand Challenges Canada MHIN has initiated a series of Global Mental Health innovations by enabling knowledge and leveraging resources. Some of these projects have included screening for neurodevelopmental disorders during the National Program of Immunization (NPI), using a smart phone EEG to diagnose seizure disorders, using cultural therapy to counter youth violence, and using mobile clinics to extend psychological first aid in post conflict settings, to name but some programmatic initiatives.

Unifying Global Mental Health and NCDs: Political Will and Example of Turkey

A model once proposed by Julius Richmond highlights three essential factors in health policy implementation: First is the knowledge or "evidence base" of effective and appropriate interventions; second is the "social strategy" that guides policy goals; and third is the presence of the "political will" that can unite the evidence base and social strategy to enforce societal change. Getting back to the example of the successful reduction of tobacco demand in Turkey, this triad of forces had become superbly aligned. Ultimately however it was the political will that proved as the key integrating influence.

Why has the governmental response to mental health service need not been as swift or as "aligned" as that for tobacco? This is a question that is perhaps particularly salient for Turkey given her identified success in tobacco demand reduction. To be fair, a National Action Plan for vitalization of community mental health services has been adopted in 2012 by the Ministry of Health within the scope of the European-Union-funded project "Promoting Services for People with Mental Disabilities" involving WHO collaboration. The emphasis of this plan includes development of case management, teamwork, leadership training, working with families and family physicians, and implementation of quality assurance indicators in community mental health care. The establishment of a network of community-based mental health centers would provide alternative venues for psychiatric hospital based care and serve as the new nexus for families and caregivers.

Prior to the implementation of the plan and the community mental health framework, the Mental Health Unit of the Ministry of Health, had come to the brink of approving an alternative proposal for development of specialized psychiatric hospital units. The WHO Director of the Mental Health and Substance Abuse Department in advising the Ministry of Health against the adoption of this alternative approach, cited the recommendations of our National Mental Health Policy (NMHP) report developed under the auspices of Ministry of Health (9). As the lead author of the NMHP report, I recall a consultative discussion in the summer of 2011 with the WHO Mental Health and Substance Abuse Department Director, as to how it would be important not to further segregate mental health from general health and primary health. This was consistent with both the mhGAP and ethos of the Movement for Global Mental Health: "No health without Mental Health" (6). The integrated community model programs in Turkey, still a work in progress, will thus hope to bring mental health services closer to the people and enable families to be more directly involved (and responsible) in caring for their loved ones.

Why has the pace of mental health reform in Turkey been slow? It has taken more than a decade and a half since the country was struck by two major earthquakes in 1999 that represented the foremost jolt for an awakening as well as "a window of opportunity" for future transformation (10). Like in the tobacco demand reduction campaign, the national response had been promising and exciting, especially since it was facilitated by a strong sense of volunteerism, cooperation by both national and international guilds, as well as national and international NGOs, all sharing responsibility for the development of resources and infrastructure that had been lacking in the community and primary care contexts when the disasters struck. The activities at the time of the disasters included training of community and primary care personnel, and awareness building campaigns for teachers with psychosocial orientation to address the needs of youth exposed to trauma and displacement. The revitalization of linkages between mental health and primary care was to be a cornerstone. After all, this approach was not new, and had been innovatively envisioned in the 1960s following the national health reform undertaken in the country under the leadership of Nusret Fisek, then serving as the Undersecretary in the Ministry of Health: mental health component was envisioned in the primary care model but could not be implemented, got neglected, and could not have an inclusive "niche" in the community and primary care context, for over 50 years (9).

Nevertheless, one can argue that the evidence base, the social strategy and political will as envisioned by the

Richmond model had almost come into alignment in the post-earthquake era, but the political will quickly dissipated. One can argue that the missed opportunity was perhaps the lack of adoption by the government of a comprehensive Mental Health Law (that still remains elusive) despite extensive and admirable advocacy by leading national mental health associations including the Turkish Psychiatric Association and the Turkish Neuropsychiatric Society that is celebrating the centennial of its foundation this year.

The irony in this comparison is that the same Mental Health Unit within the Directorate of Primary Care in the Ministry of Health that was assigned the task for mental health reform after the earthquake was also the same unit primarily engaged in the tobacco prevention campaign launched by the Ministry of Health subsequently in tandem with the WHO Framework Convention on Tobacco Control (FCTC), the first such treaty negotiated under the auspices of the World Health Organization representing an impetus for developing a regulatory strategy to address addictive substances by emphasizing demand reduction strategies as well as supply issues. The corollary of this is that a regulatory strategy is needed for consolidating political will and that Laws and Treaties matter, especially in Turkey. Given the achievement of the tobacco control program undertaken by the Ministry of Health, it is therefore difficult to deny that the crux of the problem in the fight for mental health reform rested on political will, or its absence thereof.

The WHO NCD and Mental Health Cluster (NMH)

The good news is that the the NCD framework now includes the NCD and Mental Health Cluster (NMH), the notion of Global Mental Health in LMICs can no longer be regarded as separate and equal, but unified with chronic diseases and NCDs, as also violence and injury prevention, disability and rehabilitation. As in the historic example of the Brown v. the Board of Education United States Supreme Court decision rendered on 17 May, 1954, whence Attorney Thurgood Marshall (who later was to become

a Supreme Court Justice) eloquently argued against constitutional sanctions for segregation by race, and for equal opportunity in education (11), so also persons with mental disorders, needed to challenge the viability of a separate and equal doctrine that has segregated mental health from general health and made it unequal for so long, leading to social exclusion of persons with mental disorders and disabilities. Persons with mental disorders are beginning to resume their rights as intended by the Fourteenth Amendment that no state shall deprive anyone of either "due process of law" or of the "equal protection of the law." An equitable and comprehensive Mental Health Law (not just policy) in the LMIC context is therefore essential to value the due process and consolidate much needed reforms.

With increasing improvements in childhood mortality in the LMICs, mental and neurodevelopmental disorders are now predicted to become a greater contributor to the GBD across the lifespan. In this new era, political will remain as a transgressing factor given competing resources, and mental health enlightenment and fight against stigma all the more important. There is ample evidence that many mental disorders begin early and serve as risk factors for severity and outcome of many traditional NCDs. In turn, many mental and substance use disorders may result as a consequence of "living with NCDs". In this complex matrix the environmental, lifestyle, socioeconomic influences therefore continue to interact with genetic and epigenetic factors to change the severity and outcome of all NCDs.

Improvements in Childhood Mortality within the Millennium Development Goals (MDGs)

During the past two decades, improvements in health care have led to a decrease in childhood mortality and an increase in life expectancy in the LMICs. These positive trends have set the stage for a complex epidemiology of health and disease as more children survive into adulthood and are also predisposed by early disease, malnutrition and adverse environmental and psychological influences and experiences for later development of chronic diseases including

cardiovascular and cerebrovascular diseases, diabetes, cancer, as well as mental and substance, neurodevelopmental and neurodegenerative disorders (12). The LMICs in the Sub-Saharan Africa (SSA) achieved a third reduction in under-five year mortality over the period 1990-2010. In this regard, children in SSA under the age of fifteen years currently consist of major proportion of the population and are surviving. In ascending order, the under-fifteen population proportions in SSA include: 29%, South Africa; 38%, Ghana; 43%, Kenya; 44%, Nigeria (most populous country in all Africa); and 49%, Uganda. These figures contrast with under-fifteen proportions in Europe and the United States, in descending order: Turkey (26%), Ireland (21%), United States (20%), UK (18%), Netherlands (17%), Russian Federation (16%); Sweden (15%), Greece (14%), and Germany (13%). Many children are now expected to lead productive lives and will represent a critical population sector for sustaining the economic development of their regions in the near future. The overall numbers for under-fifteen populations in the world's two most populous countries are, namely: 18%, China (18%); and 29%, India, reflecting a switch in ranking when a more youthful Indian population will supersede that of China on absolute terms.

Fogarty International Center (FIC) and NIMH Programs

In recognizing these issues the Fogarty International Center (FIC) and the NIMH have developed research partnerships linking "Brain Disorders in the Developing World: Research across the Lifespan" (FIC), and Collaborative HUBS for International Research in Mental Health" (NIMH). These initiatives seek to address the adverse impact of social and environmental factors ranging from environmental pollutants to chronic stress and leading to the expansion of research capacity in LMICs. The Collaborative HUBS is contributing to development of evidence base for mental health interventions in LMICs through integration of findings from translational, clinical, epidemiological, as well as policy research. A unique aspect has been the more recent emphasis on leveraging resources and encouragement of partnership with governmental agencies, NGOs, and between competing academic centers within specific regions. The integration of research findings within LMIC community practices through a program of implementation research, i.e., building evidence-based interventions into practice with a greater emphasis on the resources and context of local care settings, is an over-arching objective. Parallel to this objective, programs will try to address the training gap, in particular, in implementation research relevant to the LMIC context.

An important approach in this strategy involves training of LMIC investigators to develop research capacity, share experiences, and contribute to leadership decisions in their communities. The approaches include activities for LMIC investigators to gain as broad an understanding of research methods and content areas of interest emphasizing better identification of modifiable risk factors, development of culturally acceptable screening tools that can be utilized in resource poor settings, and interventions that can improve chances of recovery (13). There is a need for enhanced digital access to scientific literature for LMIC investigators and trainees, and free dissemination of research products, a requirement for all federally funded programs. Last but not least, all training needs to be situated upon the cornerstone of universal principles of research ethics that include both structured curricula as well as participation in didactic discussion and review sessions emphasizing protection of research subjects (enhancing opportunities for inclusion as well as protections), collaboration, data sharing, promotion of stewardship, professionalism, and prevention of scientific misconduct.

Acknowledgements

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