


Diagnosing Mental Illness: A Spectrum of Controversy

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The mental health community is facing some recent ripples with the newly released fifth revision of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*. The *DSM-5* officially has eliminated familiar autism spectrum diagnoses, among others. Released in early May 2013 by the American Psychiatric Association, this well-known and familiar classification guide has now pulled Asperger syndrome, pervasive developmental disorder (PDD), not otherwise specified, and childhood disintegrative disorder.

Asperger syndrome was the formal term used to describe those with no intellectual disability or language deficit, while PDD was usually assigned to “higher-level” functioning persons who did not seem to meet the distinct criteria for autism. Childhood disintegrative disorder referred to children who developed typically but experienced severe regression after the age of 3 years.

Rather than making a distinction for these 3 kinds of classifications, the *DSM-5* will, moving forward, incorporate all 3 of these former diagnoses under 1 umbrella, as a single diagnosis of “autism spectrum disorder” (ASD). There are numerous other changes that are interesting, such as the term for “mental retardation” that will now be called “intellectual disability” (or “intellectual developmental disability”), and “gambling” and “tobacco use” are newly added under the “substance-related and addictive disorders” category. There is also an additional chapter on obsessive–compulsive and related disorders, which is inclusive of 4 newly listed disorders: excoriation (skin picking) disorder, hoarding disorder, substance-/medication-induced obsessive–compulsive and related disorder, and obsessive–compulsive and related disorder due to another medical condition.¹ Interestingly, nonsuicidal self-injury, caffeine use disorder, and suicidal behavior disorder are among the “conditions for further study” list.

There are several groups and individuals in leadership positions representing the current status of mental health—including Thomas Insel, director of the National Institute of Mental Health—who are expressing outrage and doubt about the validity of what such new measures imply. Furthermore, there is speculation about how such revisions will serve to meet the financial and service-reaching needs of patients. Insel reflected that some of the recent decisions put into the shifts of these diagnoses show a “lack of validity.”² This has caused, according to some sources, an uproar and even a boycott of the new

manual in mental health groups throughout the United States and Europe and in Australia as well. Although the *DSMs* have long seemed to serve as the “bible” for practitioners of mental health, the National Institute of Mental Health (NIMH) is one of many groups asking doctors and those involved with mental health to consider diagnosing mental disorders as rather a more focused kind of “precision medicine.”

Insel and the NIMH have been reportedly working on the Research Domain Criteria (RDoC) project for over a decade. “With the incorporation of genetics, imaging, cognitive science, and other levels of information,” their goal is “to transform diagnosis by . . . laying the foundation for a new classification system.”

The definition of this group’s major categorizing for a new nosology has been working under the basis of the following assumptions:

- (1) “A diagnostic approach based on the biology as well as the symptoms must not be constrained by the current DSM categories.
- (2) Mental disorders are biological disorders involving brain circuits that implicate specific domains of cognition, emotion, or behavior.
- (3) Each level of analysis needs to be understood across a dimension of function.
- (4) Mapping the cognitive, circuit, and genetic aspects of mental disorders will yield new and better targets for treatment.”³

The first 2 RDoC assumptions mentioned previously seem to be distinctly related to diagnoses and to how we think about the classification of disease. The term “biological” and the

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“biology” involved in mental disorders designated as part of a “new nosology” are interesting.

The speed of reaction and expressed reservations about the new manual should be taken into context. When the *DSM-IV* was released, the forum of expressed trepidation may have seemed less pronounced because the World Wide Web was not as immediate, and therefore, the “viral” capacity of disapproval may not have been as largely perceived as such. There is clearly something that activates us when refutations of something new and well studied with scholarly prowess seep across the Internet.⁴ When the *DSM-IV* was published, its early critics thought that its contents promoted one-dimensional “tunnel vision” thinking,⁵ and yet, perhaps there seemed to be more time to digest and understand its contents, which led to better consideration and acceptance.

Some of the ways we struggle to understand classification of mental disorders and the understanding of behavior in general have been the result of the variances in interpretation between those who study the effects of agents on behaviors and those who work with the individuals whose symptoms manifest as part of a multitude of behaviors that weave together across several domains of function.

Upon the release of the new *DSM-IV* in 1994, psychiatrist Simon Sobo wrote,

DSM III appeared in 1980. It was the defining characteristic of psychiatry's new culture. Biological and scientific psychiatry had assumed dominance in academia and most of the journals. As part of this, the pendulum in the nature/nurture controversy had swung to the other side. In the new paradigm, the source of anxiety was not fears whose content was cut off from consciousness. The cause of panic attacks was not terror about something unknown. The cause of practically all patients' psychiatric symptoms was not to be found in the psyche, not in consciousness or unconsciousness, not in psychological conflict, but in the physical brain, in chemicals, neural pathways, and genetics. The NIMH now demanded that those who approached psychiatric problems had to have the same mindset as other physicians. Republican President George Bush and Congress made an official proclamation that the 1990s were to be the “Decade of the Brain.” As it was doing in so many fields of medicine, industry, in this case the pharmaceutical industry, with its vast resources and research capabilities, soon played a pivotal, and then dominant, role in academic clinical psychiatry, in research and training, and the continuing education of physicians. This created a new problem. Conclusions were no longer being evaluated on a level playing field. Billions of dollars were involved in educating physicians and psychiatrists how to think like “experts,” many of them professors from our most prestigious universities who had been hired by pharmaceutical companies to spread their message.⁴² Their success has been so complete, that the average psychiatrist, assumes future breakthroughs will come from new medications.⁶

Dr Sobo's warning and reactions to the then-new *DSM-IV* are well visited at this time. Perhaps the third recommendation by the RDoC will preserve an important effort: an effort to ensure that the biological predispositions and the behaviors are best contextualized in the moment. The clause of this

recommendation, which asks for “the under[standing] across a dimension of function” implies that behaviors and treatment are ever changing and are largely affected by multiple understandings of function. In order to “map” the circuits, which is the fourth recommendation, we need to see the whole person. Our treatment options at best take into account the history and comorbidities, and we are not in the age of “prescribing treats all” mentality. Symptoms are a critical aspect of diagnosis, but they are considered with a patient's culture and psychological function, and a medicine's impact in the scope of treatment works as part of the mental function of the patient.

Insel, in lashing out at the new *DSM-5*'s lack of biological understanding, wrote

In the rest of medicine, this would be equivalent to creating diagnostic systems based on the nature of chest pain or the quality of fever. Indeed, symptom-based diagnosis, once common in other areas of medicine, has been largely replaced in the past half century as we have understood that symptoms alone rarely indicate the best choice of treatment.²

Perhaps it is time for us to be more attentive to the context of how we understand mental behavior. As we move into the implementation of incorporating the *DSM-5* into our scope of practice, perhaps we can be mindful about the biological mechanisms of behavior and view symptoms across a broad domain of function. This is one of the continued goals of this journal.

Alcohol abuse is the target of the first article in this issue. Eun-Young Hwang and Sun-Hwa Oh question whether there is an immediate and short-term impact of 3 different types of music therapy interventions on the levels of depression, anxiety, anger, and stress in patients with alcohol dependence. While differences in depression and stress levels were found between participant-selected songs and therapist-selected songs in the singing group, significant differences in the effects of singing, music listening, and playing instruments on the levels of depression, anxiety, anger, and stress were more difficult to find.

The music therapist of today should be equipped and informed, and having technological skills as recently outlined in a former special issue of *Music and Medicine*⁷ is more than useful. Yuezhou Yu, Warren M. Shadd, Kelly A. Kleifges, Linda A. Myers, and Phillip L. Pearl describe examples of how progress in communication technology can enhance the impact of music therapy interventions on individuals with neurobehavioral disabilities. For example, recent technological modifications to instruments have enhanced their accessibility and versatility as a therapeutic medium. Integration of computers and the Internet have created a most powerful platform for therapy. It is fascinating to see how fast technology evolves, providing such quantum leaps in quality of life for individuals with sensorimotor deficits and neurodevelopmental disabilities.

In the next article, Julian Koenig, Marco Warth, Rieke Oelkers-Ax, Alexander F. Wormit, Hubert J. Bardenheuer, Franz Resch, Julian F. Thayer, and Thomas K. Hillecke offer an overview of a decade's research program in the development of active

music therapy in patients with chronic pain. Chronic pain is an issue of growing importance on a global scale as pain has become a core aspect of quality of life. Globally, in our aging societies, there is an urgent need for economically affordable health interventions, such as music therapy. Stating that music is widely used to reduce pain in a broad variety of clients and settings, the authors underline that most studies focus on the pain reducing effect of so-called receptive music interventions on patients with acute pain, whereas studies investigating the effect of active therapy (ie, music making) on pain perception in patients with recurrent or chronic pain seem to be rather rare. Summing up the results of their own previously published studies conducted during the last 10 years, these authors provide evidence for a reduction of both pain frequency and pain intensity in patients with recurrent or chronic pain. Further controlled and randomized studies are necessary to investigate specific psychophysiological processes leading to such beneficial effects.

ASDs are a fast growing field of interest for music therapy. Ladan Dezfoolian, Mina Zarei, Hassan Ashayeri, and Majid Yousefi Looyeh present a pilot study undertaken to evaluate the effects of Orff-based therapeutic music interventions on social interaction, verbal communication, and repetitive behavior of 5 children with ASD. They found promising data demonstrating possible improvement of these parameters, and further controlled studies are encouraged.

Recently, a new focus of research in music therapy about the beneficial effects of therapeutic singing can be observed in Donna Goodridge, Jennifer J. Nicol, Karla Horvey, and Scott Butcher's feasibility study undertaken in patients with chronic obstructive pulmonary disease (COPD). In an aging society, such disabling disorders are of growing importance and music therapy intervention may promise significant impact on health status and quality of life as well as on cost containment. In their study, comprising a period of 2 months with 8 singing sessions, the authors show as yet no significant differences in health-related quality of life, exercise capacity, or perception of illness between singing participants and control participants with usual care. However, longer periods of intervention in such a chronic disease may promise significant outcomes in future controlled studies.

Adding another significant aspect to research in neurovegetative rhythmicity as measured by heart rate variability (HRV), Eun-Jeong Lee and Joydeep Bhattacharya studied the beneficial use of monochords in patients with cancer undergoing chemotherapy and also compared those effects with HRV changes induced by progressive muscle relaxation (PMR). Designed as a randomized trial over a period of 6 months with 38 participants, the study demonstrates the high complexity of HRV as a monitoring tool for psychophysiological effects. Different activity levels of the parasympathetic and sympathetic nervous systems were identified in both interventions, making again clear the need to investigate further the relationship between the physical and psychological states induced by certain

relaxation methods and their possible relation to specific activity of HRV.

The SAGE 2012 Best Paper Award was presented in Bangkok, Thailand, at the 2nd conference of the International Association for Music and Medicine, to researchers at Chulalongkorn University. Bussakorn Binson, Somrat Lertmaharit, Pranee Satayaprakop, Kamornrat Chongthanakorn, Chanchana Boonyakrai, Samran Klinphaetkit, Navaphan Nakkaban, Patravoot Dinprangpada, and Charuwan Boonpob presented their work in 3 hospitals on the effects of live music or music listening intervention on Thai patients undergoing hemodialysis on blood pressure, pulse rate, pain, and anxiety. It may surprise some readers to learn that the results showed no significant differences in these parameters between the live music intervention group and the music listening group. Both applications of music significantly reduced the rate of pain and anxiety, opening some degree of therapeutic, practical, and economic flexibility to this kind of application.

We look forward to your continued submissions that will further the understanding of how music and medicine work to integrate aspects of health and wellness. We are committed to bringing together the critical elements of music and medicine in an effort to pursue the growth of both the understanding and application of music. We welcome submissions that address music's effect in treatment strategies and its use in the prevention of disease process, as well as studies that consider the mind's role in enhancing coping mechanisms that can strengthen perception and/or resilience within the disease process.

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