Highlights from the Biennial International Congress on Schizophrenia Research (ICOSR), April 21–25, 2013

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Abstract

The 2013 International Congress on Schizophrenia Research, held in Orlando Grande Lakes, Florida, attracted over 1,000 attendees to the JW Marriott Hotel from 21–25 April 2013, not to mention the satellite meetings on cognition and the schizophrenia prodrome. With thanks to the Schizophrenia Research Forum (www.schizophreniaforum.org), a project of the Brain and Behavior Research Foundation, we bring you the following report on the Congress' sessions concerning *DSM-5/ICD-11* and the psychosis continuum. We also want to thank Congress directors Carol Tamminga and Chuck Schulz, as well as meeting staff Dorothy Denton and Cristan Tamminga, for their gracious assistance.

Schizophrenia and *DSM-5* and *ICD-11*

Empty seats were few and far between and microphone lines were long on the morning of 23 April 2013 at the ICOSR symposium entitled "Future Classification of Psychotic Disorders: *DSM-5* and *ICD-11*." With the May 2013 publication date of the fifth revision of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* rapidly approaching, clinicians and researchers alike were eager to hear about the upcoming changes that session co-chair Wolfgang Gaebel noted will "shape our future professional lives."

Describing DSM-5

The first speaker was Rajiv Tandon of the University of Florida, Gainesville, who recounted his experiences as a member of the *DSM-5* Work Group on Psychotic Disorders and provided an overview of the group's efforts. He discussed the objectives of the new revision: improvements in validity, reliability, and utility; simplification; and, the incorporation of research. He also described the basic principles of the revision: 1) given that the *DSM* is a manual for clinicians, the changes made must be implementable in routine clinical practice; 2) any changes should be guided by research evidence; 3) continuity with previous versions should be preserved whenever possible; and, 4) harmony with the *International Classification of Diseases (ICD)* should be maintained whenever possible.

From 2008 to 2012 the Work Group met twice a year in person and one to two times per month via teleconference. Additional tasks were assigned to small groups and to individuals. Throughout this time, the Work Group reviewed the scientific literature and relevant datasets, developed and discussed topic reviews, and, of course, debated the issues. They also interacted with related Work Groups such as the one on mood disorders. It was a tough and very time-consuming process, Tandon admitted.

Tandon then moved on to describe the major changes coming to the classification of psychotic disorders in *DSM-5*, noting their iterative nature. Due to a lack of long-term usability and stability, the current subtypes of schizophrenia will be eliminated. In an effort to better capture the het-

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A message from the ICOSR co-founders …

We are delighted that Allison A. Curley from the Schizophrenia Research Forum and Helen L. Fisher of the Institute of Psychiatry have provided for readers of ***Clinical Schizophrenia & Related Psychoses*** this detailed synthesis of the two key sessions from the Fourteenth Biennial International Congress on Schizophrenia Research recently held in Orlando Grande Lakes, Florida, April 21–25, 2013. Scientists representing the broad range of disciplines involved with discovery in schizophrenia gathered at the Congress to exchange data, techniques and ideas. Their cutting-edge experimental work stimulated lively discussion and open exchange of ideas toward a better understanding of the neurobiology and treatment of schizophrenia. We were particularly pleased that the Congress also provided a special opportunity for introducing young investigators to the colleagueship of the schizophrenia scientific community.

Understanding schizophrenia is a leading challenge for medical research today. We are delighted that the Congress plays a formative role in advancing new knowledge concerning this disabling condition. As you read this excellent report, we hope that you share the same excitement that we have concerning our field's development.

Carol Tamminga, MD and Charles Schulz, MD
Co-Founders and Co-Organizers
International Congress on Schizophrenia Research

erogeneity of schizophrenia and other psychotic disorders, several dimensions—reality distortion, negative symptoms, disorganization, cognition, depression, mania, and psychomotor symptoms—have been added, though they will be located in the Appendix. The criteria for schizoaffective disorder have also been modified to better delineate it from schizophrenia and, instead of allowing for brief episodes of mood symptoms, now require these features to be present for a majority of the time. Attenuated psychosis syndrome, characterized by mild symptoms that do not fulfill the criteria for full-blown psychosis, will be included in the Appendix. Finally, a consistent definition of catatonia will now be used across the *DSM*.

Symposium co-chair William Carpenter of the University of Maryland in Baltimore was next up to the podium. Carpenter, the chair of the *DSM-5* Psychotic Disorders Work Group, discussed some of the more controversial revisions to the chapter, including its organization, whether or not catatonia should be a formal diagnosis in the psychotic disorders section, the de-emphasis of Schneiderian first-rank symptoms, and the changes to schizoaffective disorder. Another major controversy was the paradigm shift toward thinking about schizophrenia as a syndrome with domains of pathology. The Work Group recommended the addition of symptom dimensions in addition to the diagnostic classifications, but at the last minute the dimensions were relegated to the Appendix, a change Carpenter characterized as a "major disappointment."

By far the most controversial issue within the Work Group, he said, surrounded a proposed attenuated psychosis syndrome. External criticisms against its inclusion included the potential for false positives, more therapeutic harm than good, and stigmatization of young people. The Work Group heavily debated the reliability of the diagnosis during numerous field trials, Carpenter said, ultimately deciding that it was not reliable enough. Thus, they recommended the addition of the attenuated psychosis syndrome to the Appendix, marking it as a condition for further study. Although the upcoming changes to the *DSM-5* have been the subject of much controversy, Carpenter noted that the manual will be "a living document," with revisions likely happening much sooner than in the past.

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Illuminating ICD-11

The topic then turned to the proposed changes coming to psychotic disorders in the newest version of the World Health Organization's diagnostic tool for all medical disorders, the *ICD-11*. Wolfgang Gaebel of Germany's Heinrich-Heine University in Düsseldorf is the chair of the *ICD-11*'s Working Group on the Classification of Psychotic Disorders, and also a member of the *DSM-5* Psychotic Disorders Work

Group. He described the major changes that have been proposed (Gaebel, 2012), noting that, unlike the *DSM-5*, the *ICD-11* criteria must be applicable worldwide, even in areas with limited resources. Also, unlike the *DSM-5*, the *ICD-11* is in a much earlier stage, due to be presented to the World Health Assembly in 2015, and thus proposed changes are not yet finalized.

Similar to the *DSM-5*, first-rank symptoms will be de-emphasized. A diagnosis of schizoaffective disorder will now require that the symptom criteria of both schizophrenia and a mood disorder be met within a short time frame. Schizophrenia subtypes will be replaced with a system of coded specifiers, added after diagnosis, that describe a patient's symptoms and illness course. Two points of continuing debate, said Gaebel, are whether functional impairment should be included as a separate specifier, and whether it should be a mandatory component of the schizophrenia diagnosis. He noted that field trials will hopefully be completed in the second half of 2013.

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The final speaker of the session was Michael Green of the University of California, Los Angeles, who addressed the issue of where cognition fits into the *ICD-11*, discussing both its placement as well as its implementation. The Working Group considered placing cognitive impairments in three different places within the manual—as part of the guidelines for diagnosis, as a coded specifier after diagnosis, or as part of the Appendix—and benefited substantially from the *DSM-5* Work Group's discussion of this issue. The *ICD-11* group quickly eliminated the option of including cognitive impairments in the diagnosis based on the rationale that cognitive deficits would not substantially help with differentiating between different psychosis diagnoses (Bora et al., 2010). The Working Group also felt that inclusion of cognitive impairments in the Appendix would not substantially increase the awareness of cognition in psychotic disorders. However, they decided that including them as a coded specifier after diagnosis would both help clinicians to become aware of this core feature and guide treatment, and thus they recommended this option.

Green then described the practical implications of including cognitive impairments in the psychotic disorders section of *ICD-11*, describing the Working Group's thought process regarding the range of cognitive domains (limited vs. broad) that should be included and how they should be measured (quantitative scale vs. presence/absence). The group ultimately suggested a five-point scale. The *ICD* International Advisory Group, a committee that is overseeing the new revisions, then recommended that a broad range of cognitive domains be included in the assessment. A second oversight committee, from the WHO's Department of Mental Health and Substance Abuse, has subsequently recommended that the deficits should be rated as present or absent rather than quantified, in the interest of simplicity, although they noted that a scale could be evaluated in field trials. Remaining issues include determining the threshold for the presence of cognitive symptoms and how to evaluate a scale during field trials.—Allison A. Curley.

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Is the Psychosis Continuum for Real?

The symposium "Is the Psychosis Continuum for Real? The Cognitive, Environmental, and Neural Correlates of 'Real' Psychotic Experiences in the General Population" sought to further increase awareness of the presence of psychotic symptoms amongst individuals who do not meet diagnostic criteria or require psychiatric care for a psychotic disorder. Numerous studies have now shown that a substantial minority of children and adults in the general population report having psychotic-like experiences (see Kelleher et al., 2012, for a review), while a smaller proportion are likely to have clearly defined psychotic symptoms, and even fewer will be diagnosed with a psychotic disorder during their lifetime, leading to the postulation of a quantitative continuum of psychosis (van Os et al., 2009). For most individuals, subclinical psychotic-like experiences and symptoms appear to be transitory (Cougnard et al., 2007), and it is debatable as to whether they index risk *only* for psychotic disorders (Fisher et al., 2013; Murray and Jones, 2012; Werbeloff et al., 2012). Nonetheless, psychotic symptoms do persist in some individuals, seemingly without their experiencing any palpable distress or requiring psychiatric care (Linscott and van Os, 2013).

The speakers in this symposium examined various ways in which this non-clinical group with psychotic symptoms can be differentiated from individuals with a clinical diagnosis of psychosis. Such comparisons provide promising opportunities to unravel psychosis etiology. By gaining greater insight into why only some individuals with anomalous or unusual experiences develop a need for psychiatric care, it may eventually be possible to halt, or at least reduce, the likelihood of an individual moving along a hypothesized continuum to a full-blown, clinically relevant psychotic disorder.

Iris Sommer, UMC Utrecht, the Netherlands, perfectly set the scene for the symposium by showing a video in which a man without any psychiatric diagnosis described the voices that he has heard for many years. This video clip instantly drew our attention to clear differences in his experience and interpretation of his voices than tend to occur for patients seen in a psychiatric clinic. Namely, the voices he heard mainly said positive things to him, he was not distressed by their occurrence, and he did not provide a delusional interpretation of their presence; rather, he seemed to accept that they were "just there." This comfortableness with ambiguity and lack of a clearly formed belief about why the voices occurred seems to be a key distinguishing feature of non-clinical from clinical voice hearers, and fits with research from Smeets et al. (2012) that suggested the combination of hallucinations and delusions increased the risk of developing a psychotic disorder. The good social and occupational functioning of the man in the video also set him apart from individuals requiring treatment for a psychotic disorder. However, Sommer also presented findings demonstrating overlap in the brain regions activated during auditory hallucinations in non-clinical and clinical individuals (Diederen et al., 2012), suggesting that the underlying phenomenon may be similar in both groups, but the important difference could be the interpretation of the experience.

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The contrasting appraisals of non-clinical and clinical individuals with psychotic symptoms were also the focus of the presentation by Emmanuelle Peters, Institute of Psychiatry, London, U.K. In keeping with cognitive models of psychosis (Garety et al., 2001, 2007), she advocated that the way individuals appraised anomalous experiences, such as hearing or seeing things that other people could not, was a crucial factor in determining whether they developed psychotic symptoms requiring psychiatric care or continued to have non-distressing psychotic experiences. Lovatt et al. (2010) found that non-clinical individuals tended to account for their psychotic experiences by using psychological, spiritual, and normalizing explanations, while the diagnosed group were more likely to think that "other people" were causing their psychotic experiences, and believed they were in danger or being threatened. Peters suggested this more paranoid worldview might have been brought about by exposure to interpersonal trauma (Lovatt et al., 2010) and is likely to result in greater distress (Gaynor et al., 2013) and, thus, subsequent need for psychiatric care.

However, Kirstin Daalman, UMC Utrecht, the Netherlands, presented data that contradicted part of Peters' hypothesized pathway. Daalman et al. (2012) have found that *both* non-clinical and clinical groups with auditory verbal hallucinations are more likely to report a history of interpersonal forms of trauma in childhood when compared to controls. Instead, it was the emotional valence of the voices that differed between the groups, with non-clinical individuals experiencing voices that were reassuring, and those with a psychotic disorder more frequently reporting their voices as threatening. One possibility is that exposure to prior trauma or revictimization in adulthood might have adversely impacted on the worldview held by those individuals who went on to require psychiatric care. Clearly, more exploration of the full etiological pathway to developing clinically relevant psychosis is required.

The final presenter, Leslie Horton, University of Pittsburgh, Pennsylvania, presented research on schizotypy, which Sommer had earlier suggested lies between psychotic-like experiences and psychotic disorder on the psychosis continuum. Indeed, Horton drew our attention to research by Kwapil et al. (2008), which indicated that both positive and negative forms of schizotypy are associated with impaired functioning. Nonetheless, she suggested that these types of schizotypy may have different etiologies and outcomes. Horton reported that individuals with positive schizotypy did not tend to have schizoid symptoms (Barrantes-Vidal et al., 2013) but were more likely than those with negative schizotypy to feel suspicious or maltreated in the moment and also experience more psychotic-like symptoms when under stress when compared to those with low levels of schizotypy (Barrantes-Vidal et al., unpublished). By contrast, individuals with negative schizotypy tended to have no thoughts or feelings in the moment when assessed using experience sampling methodology. Further work is required to explore the outcomes of individuals with positive and negative schizotypy, and they may also represent a useful group for exploring the etiology of psychotic disorders without the confounding effects of medication and chronic illness.

Tony David, Institute of Psychiatry, London, U.K., rounded off the symposium by reflecting on the possibility of various continua with perhaps the continuum of positive to negative valence of psychotic symptoms being of particular importance. He also raised the interesting question of whether individuals situated at one point on a psychosis continuum could move up or down the continuum. Finally, he cautioned about the need to consider directionality more

carefully and explore further the role of dissociation and the possible link between appraisal and biological experience.

The debate concerning the presence of a continuum of psychosis rumbles on (see Linscott and van Os, 2013, for a recent update), with potentially important implications for future editions of *DSM* and *ICD*. However, the existence of individuals in the general population who have psychotic symptoms but do not require psychiatric care appears to be very much a reality.—Helen L. Fisher.

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