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An autism dimension for schizophrenia in the next diagnostic and statistical manual?

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Dear Editors,

As the Diagnostic and Statistical Manual for Mental Disorders revision (DSM-Five) task force for schizophrenia moves towards a dimensional approach for capturing symptoms, it is important to consider that the nature of these dimensions still remains a subject of debate. With this in mind, we would like to weigh support and limiting factors behind an autism dimension for schizophrenia.

Although schizophrenia and autism spectrum disorders (ASDs) have historically been regarded as part of the same spectrum (Cappon, 1953) and as theoretically distinct (Rutter, 1972), an accumulating body of recent evidence suggests that they are related. From the behavioral standpoint, research indicates that numerous phenotypes including stereotypic movements and social/cognitive deficits define both populations (Esterberg et al., 2008; Mittal and Walker, 2009). There is also evidence for a common early prenatal insult (Brown, 2006). Developments in neuroscience also suggest that both are disorders of dysfunctional neural connectivity (Enticott et al., 2008). Consistent with this idea, several common structural abnormalities have been indicated (Voineskos et al., 2011). Dovetailing these findings are studies implicating an analogous underlying genetic risk (see King and Lord, 2011 for a review) and observations that parental schizophrenia is a significant risk factor for autism (Daniels et al., 2008). At a diagnostic level, investigators have noted elevated rates of autistic traits in schizophrenia patients (Sheitman et al., 2004) and conversely, symptoms of psychosis in ASDs (Raja and Azzoni, 2010).

While theoretical conceptualizations for a link have been reviewed (Crespi and Badcock, 2008; King and Lord, 2011), there has been little discussion of how this might affect schizophrenia in the upcoming text-revision. In the current proposal, a dimensional approach involves rating a wide range of symptoms along a continuum of presence/severity. A potential autism dimension (or dimensions) might capture communication/interaction, social relatedness, and restricted or repetitive patterns of behavior in this same fashion. Although we are entering uncharted territory with DSM-Five, factors essential to selecting criteria in the current DSM may provide a map. Criteria are typically selected, in part, on the basis of prevalence base rates: while there is no gold standard, 30–40% is considered optimal

(Widiger, 1994). Although there have been few investigations to date, findings suggesting that a substantial percentage of adults with schizophrenia show autistic features (71%; Sheitman et al., 2004), and that children with schizophrenia show features from a range of ASDs (28–55%; Rappaport et al., 2009) provide some support for a dimension.

Despite this evidence, there are gaps in the available literature that limit our ability to comprehensively evaluate inclusion of an autism dimension. More studies designed to determine test characteristics are clearly needed. Further, the available data paints a nuanced picture of how autistic features may overlap with existing schizophrenia symptom domains. For example, Sheitman et al. (2004) found that negative, but not positive symptoms, covary with autistic symptoms. Further, researchers noted that although autistic traits were prevalent in a high-risk population and associated with schizotypal symptoms, these features did not predict conversion (Esterberg et al., 2008). However, Esterberg et al. (2008) do note that the absence of this predictive relationship indicates that the autism/high-risk symptom association does not simply reflect criteria overlap, as the schizotypal symptoms themselves are predictive of conversion. Furthermore, one interpretation of the results from the noted Sheitman et al. (2004) study is that autistic traits may reflect more core features of schizophrenia, as they covary with negative symptoms.

Systematic identification of autistic features could ultimately assist in our understanding of the etiological mechanisms at work in both disorders. For example, it is possible that measurement of autistic symptoms/features could aid in the identification of genetic subtypes of schizophrenia (Esterberg et al., 2008). Additionally, creating an autism dimension has numerous implications in regard to diagnostic clarification. This is particularly important given the recent trend of increasing ASD diagnoses (Wing and Potter, 2002). The inclusion of a dimension could help alleviate confusion for clinicians and families by lowering the frequency of comorbid diagnoses, while enhancing clinical awareness about the presence of symptoms/features of autism in patients with schizophrenia. From an anecdotal perspective, our prodromal clinic has seen a number of referrals showing symptoms/features of ASDs as well as attenuated positive symptoms. It is not uncommon for these individuals to report a diagnostic history including several ASDs, and for them to report feeling unsatisfied with autism-specific treatments (which do not directly address symptoms of psychosis). To this end, a dimension could also facilitate development of treatments by providing a way to characterize individuals with psychosis who exhibit varying levels of developmental impairment. While more research is clearly necessary, a compelling biological rationale and preliminary prevalence estimates support the notion that including an autism dimension (in the main text or research section) could be a catalyst for refining identification/diagnosis, targeted treatment, and etiological understanding.

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