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Negative symptom measurement in individuals at-risk for psychosis

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To the Editors

Bleuler (2010) first proposed a theory that negative symptoms, such as inappropriate or flattened affect, social withdrawal, and lack of motivation, lie at the “core” of schizophrenia, reflecting fundamental aspects of the disorder. Recently, research has focused on the clinical high-risk state, which is a crucial period for understanding vulnerability markers of psychosis. In their article, Piskulic et al. (2012) highlight an often over-looked area in their investigation of negative symptoms in high-risk youth. Although preliminary, the findings indicate that negative symptoms are more severe and unrelenting in individuals who transition to psychosis, and are moderately predictive of conversion to disorders such as schizophrenia. Further, given that other studies have shown that the subtle onset of negative symptoms is often the initial reason individuals seek help (Yung and McGorry, 1996a), and that untreated or unrecognized negative symptoms confer a significantly poorer course of illness and prognosis (Kirkpatrick et al., 2006), it is clear this domain is vital to our understanding of psychosis risk and early identification/intervention efforts.

Recently, the National Institute of Mental Health (NIMH) issued a statement indicating their support for the creation of measures designed to improve the assessment of negative symptoms in formal psychotic disorders such as schizophrenia (Kirkpatrick et al., 2006). The statement explained that there is a lack of concise measures in the field and that negative symptoms are under-emphasized and often assessed incorrectly (Blanchard et al., 2011). This trend is also present for high-risk youth. At present, commonly used measures that assess negative symptoms in individuals at-risk for psychosis are the Comprehensive Assessment for At-Risk Mental States (CAARMS; Yung et al., 2002), the Structured Interview for Prodromal Syndromes (SIPS; McGlashan et al., 2003), and the Bonn Scale for Assessment of Basic Symptoms (BSABS; Klosterkötter et al., 2001). However, these measures assess negative symptoms as part of significantly longer semi-structured clinical interviews, and currently there are no specific measures of negative symptoms for clinical high-risk populations.

Following the noted NIMH statement, two workgroups created empirically driven measures of negative symptom assessment for schizophrenia (Blanchard et al., 2011; Kirkpatrick et al., 2010). The Clinical Assessment Interview for Negative Symptoms (CAINS) and the Brief Negative Symptom Scale (BNSS) are based on extensive research and take into account the problematic issues with current measures. Both measures have shown significant promise in early trials (Kirkpatrick et al., 2010; Blanchard et al., 2011; Horan et

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al., 2011). Substantial improvements embodied in these measures include a differentiation of negative symptoms from function and cognition, a distinction between consummatory and anticipatory anhedonia, the omission of items that did not perform well on analysis (e.g., self-care and anhedonia intensity), and an emphasis placed on both observable and internal functioning (Kirkpatrick et al., 2010; Blanchard et al., 2011; Horan et al., 2011).

Based on the Piskulic et al. (2012) preliminary evidence high-lighting negative symptoms in the prodrome and the recent work to improve negative symptom measures for schizophrenia, we propose the formation of a new scale designed for adolescent and young adults at high risk for developing psychosis. As with the traditionally used measures for schizophrenia, there are some concerns with the current negative symptom assessments for clinical high-risk populations. For example, current measures have not benefited from empirically driven advances to our understanding of negative symptoms. There are also some more general challenges regarding length and practicality (e.g., extensive training is usually necessary), which ultimately hamper effective dissemination beyond use in the research community. In addition, the practice of adopting briefer scales designed for formal psychosis for use with the prodrome is problematic as prodromal patients often score in the lower levels of these scales (significantly limiting variability).

The field has seen promising results from efforts to design scales specifically for the prodrome (e.g., Global Functioning Role and Social scales; Cornblatt et al., 2007) and, to this end, using the CAINS/BNSS as examples for a new scale may be a logical way to develop a negative symptom assessment for high-risk individuals. From examining the NIMH workgroup research, a few potential areas of focus for a new prodromal negative symptom assessment are structure, content, and appropriateness for the target population. In regards to structure, a new measure should be brief and solely assess negative symptoms (e.g., similar to the CAINS/BNSS as a 10–15-item assessment).

In determining content, one potentially viable strategy would be to utilize the NIMH workgroup research, the SIPS, and the current prodromal research literature. The resulting material would likely be sub-divided into two broad areas such as expression and experience (as indicated by Horan et al., 2011), covering the five domains most widely believed to encapsulate negative symptomatology (avolition, anhedonia, blunted affect, alogia, and asociality). In addition, the inclusion of a distress item (quantifying the absence of distress) may prove useful, as this was shown to be effective in gauging the absence of dysphoria/emotionality and was potentially helpful in differentiating primary from secondary negative symptoms on the noted BNSS scale (Kirkpatrick et al., 2010). Additionally, the new measure should target the adolescent/young adult age range, as this period reflects the modal high-risk case, and immediately precedes the mean age of onset for formal psychotic disorders. Specifically, the item content should take into account recent advances in research, the age range, linguistic style, and experiences of this population. To this end, open items (based on factors such as the subject/patient's locale, educational situation, and interests) could be used to anchor symptom onset and intensity/frequency changes to a time line that is particularly relevant to youth. For example, inquiry surrounding time lines may benefit from instructions suggesting the use of terms such as “last semester”, “your birthday”, “when you bought the videogame you were telling me about”, or “holiday break”. This strategy may help to facilitate quick responses, limiting the length of interviews as well as improving reliable recall.

In summary, despite research implicating negative symptoms as a contributing factor in psychosis onset, this domain is currently often underemphasized. The issue is particularly relevant in clinical high-risk youth, as studies have suggested that negative symptoms occur early (long before the onset of positive symptoms), can often go unnoticed/untreated

(leading to a poorer prognosis), and may be related to conversion in this population (Yung and McGorry, 1996a; Kirkpatrick et al., 2006; Piskulic et al., 2012). A brief measure for assessing negative symptoms in this population could provide numerous improvements to our assessment, treatment, and general understanding of the prodrome. Furthermore, creating a measure that specifically emphasizes negative symptoms may provide useful insight into sub-groups with different symptoms and course trajectories. We encourage further discussion as this will help to refine and improve the design of this assessment.

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