DSM-5 cross-cutting symptom measures: a step towards the future of psychiatric care?

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The notion that psychiatric disorders occur along dimensional continua rather than as categorical entities has long been debated. Research and clinical evidence have illustrated that a categorical diagnostic schema does not accurately reflect the full realms of clinical concerns in many patients, such as the presence of subthreshold anxiety or psychotic symptoms in individuals with major depressive disorder that cause or exacerbate impairment and distress (1,2). In some instances, clinicians are forced to diagnose two or three separate disorders, typically using the "not otherwise specified" label, in order to facilitate treatment for their patients (3).

In the absence of a fully dimensional diagnostic schema, the integration of dimensional assessments of psychiatric symptomatology may be clinically useful in providing valuable information for our current understanding of mental disorders and the issue of co-occurring symptoms and conditions (1). In addition, the integration of categorical diagnoses and dimensional assessments of psychiatric symptoms may also facilitate the identification and fine-tuning of psychiatric endophenotypes, as emphasized in the Research Domain Criteria, for the various mental disorders (4).

The DSM-5 Task Force and Work Groups developed and proposed the incorporation of dimensional measures – i.e., self-(i.e., adult and child/adolescent) and informant-report (i.e., parent/guardian) versions of the DSM-5 Cross-Cutting (CC) Symptom measures – to help address the issue of co-occurring symptoms across mental disorders (5-8). This paper discusses the benefits of the DSM-5 CC Symptom measures and identifies areas for further research and development.

BRIEF BACKGROUND OF THE DSM-5 CROSS-CUTTING SYMPTOM MEASURES

The self- and informant-reported versions of the DSM-5 CC Symptom measures were developed by the DSM-5 Task Force and Work Groups to serve as a "review of mental systems" in each patient who presents for mental health evaluation and treatment. The measures assess the presence and severity of 12-13 psychiatric symptom domains that cut across diagnostic boundaries (7,8). These include depression, anger, mania, anxiety, somatic symptoms, sleep disturbance, psychosis, obsessive thoughts and behaviors, suicidal thoughts and behaviors, substance use (e.g., alcohol, nicotine, prescription medication, and illicit substance use), personality functioning, dissociation, and cognition/memory problems in adults. Many of the same domains, except for personality functioning, dissociation, and cognition/memory problems, are also assessed in children/adolescents, along with inattention and irritability. The co-occurrence and severity of these symptoms have been shown to significantly affect the prognosis and treatment of many mental disorders (1,2,9-11).

The items on the DSM-5 CC Symptom measures do not relate to any specific disorder and as such are not intended to be diagnostic or to serve as screening measures for any disorder (8). Instead, the measures were developed to be used as adjunct tools "to give clinicians quantitative ratings that characterize patients in a way that is simple, useful, and clinically meaningful" (8). It is hoped that the information from these measures will inform clinical decision-making and treatment. For instance, the ability to characterize patients has the potential to lead to customizable treatment plans and improvement in treatment outcomes. However, future studies are needed to explore if and how these measures inform clinical decision-making.

The DSM-5 CC Symptom measures are operationalized at two levels. Level 1 consists of a 23-item (adults) or a 25-item (children/adolescents) measure of the presence and severity of symptoms over the past two weeks (7,8,12). The items, with the exception of suicide ideation, suicide attempts, and substance use in children/adolescents, are rated on a 5-point scale (i.e., 0=none/never; 1=slight/rare; 2=mild/several days; 3=moderate/more than half the days; and 4=severe/almost daily), with higher scores indicating greater frequency of occurrence or greater degree of severity. The suicide ideation, suicide attempts, and substance use items on the child/adolescent version of the scale are scored on a yes/no basis.

Items scored as 2 or greater (i.e., mild/several days) or with a "yes" trigger the completion of a more detailed assessment of that symptom domain using the associated self- or informant-reported DSM-5 Level 2 CC Symptom measure. Level 2 CC measures inquire about the presence and severity of symptoms within pure psychiatric domains during the past seven days (e.g., the Altman Mania Scale for a more detailed assessment of mania, given the respondent endorsed the Level 1 mania item at a score of 2 or greater).

The intent is for all patients, regardless of DSM diagnoses, to complete the DSM-5 Level 1 and 2 CC Symptom measures routinely either at each clinic visit or at clinically-indicated intervals but prior to meeting with their clinicians. This would enable clinicians to track the presence, frequency of occurrence, and severity of overall psychiatric symptomatology in their patients over time across diagnoses,

even in those areas not directly related to the patient's primary diagnosis. This will also allow for the identification of heterogeneity within diagnoses, which is important for future research and understanding of mental disorders.

The measures were field tested in the DSM-5 field trials and demonstrated mostly good-to-excellent test-retest reliabilities (7) and strong clinical utility from patient and clinician perspectives (12,13).

DSM-5 CROSS-CUTTING ASSESSMENT: ADVANTAGES AND POTENTIAL AREAS FOR GROWTH

A number of benefits to these cross-cutting measures should be recognized. The measures are easy to administer, score, and interpret, especially in the electronic form. Even in their pencil-and-paper form, detailed instructions for scoring, scoring summary sheets, and interpretation of scores are provided to facilitate their use (5,6). They were easily incorporated in busy clinical settings in academic centers and the community and solo and small group practices in the DSM-5 field trials and pilot studies (12-14), which provides some support for their use in routine clinical care. The measures are freely available for download and use from DSM-5 Online Assessment Measures (5).

The measures are, for the most part, self-report and self-administered, which facilitates patient engagement in their own assessment and care. Similarly, there are informant versions of the measures that allow parents and guardians to become actively involved in their children's care and provide a way to open lines of communication with clinicians. As such, the incorporation of these measures into Section III of DSM-5 indicates the move towards a more patient-centered rather than a top-down approach to the assessment and care of vulnerable populations. This is important, and timely, given that patient-reported outcomes speak directly to the U.S. Patient Protection and Affordable Care Act's recent mandate that clinicians engage in patient-centered, measurement-based quality care (15).

Although the use of dimensional measurement in psychiatric treatment is not new and has been found to be clinically useful (16,17), it is still not standard clinical practice. However, as psychiatry moves towards a more measurement-based model of care, the availability and use of these measures can provide a standardized way for clinicians to assess and quantify patients' symptom profiles over time. This is particularly true if the measures are completed at regular intervals, as clinically indicated and recommended by DSM-5 (5,6).

The multi-domain nature of the Level 1 and 2 CC Symptom measures is a major strength. Use of the measures, as proposed by the DSM-5 Task Force and Work Groups, has the potential to allow clinicians and researchers to gain better understanding of how different combinations of these cross-cutting symptoms at varying levels of severity may present across diverse diagnoses, and their potential impact on patient outcomes. Lastly, and very importantly, the DSM-5 CC Symptom measures could also provide the field with a standardized way to communicate about comorbidity, remission, and recovery and lead to more customized treatments to match different symptom profiles over time.

The DSM measures have valuable potential to shift the way psychiatric care is conducted in the U.S., but they also offer an opportunity to consider what further research is needed to maximize their potential. During the DSM-5 pilot studies and field trials debriefing sessions, clinicians pointed out that in busy clinical settings, especially with new patients with limited documentation of symptoms and illness history, the possibility existed that the DSM-5 CC Symptom measures would be used as screeners for specific disorders, a use for which they were not intended or tested (12,14). This observation emphasizes the need for focused clinician education on the proper use and interpretation of the measures.

Many of the Level 1 CC Symptom measure items were derived from existing patient-reported measures (7,8,12) with sound psychometric properties. For example, the two Level 1 items for depression were taken from the 2-item Patient Health Questionnaire – a validated screening measure for depression (18). The derivation of some items from psychometrically-sound existing scales does not automatically translate into a psychometrically-sound DSM-5 Level 1 CC Symptom measure. Although the DSM-5 field trials provided promising evidence of the test-retest reliability of the items and some evidence of convergent validity, further studies of the psychometric properties of the measure are warranted. This need is heightened for items that were newly developed by the respective DSM-5 Work Groups (e.g., the two personality functioning items and the dissociation item). That they demonstrated good test-retest reliabilities (7) is a first and important step in this process.

Level 2 measures are available for some but not all Level 1 domains. DSM-5 developers wanted to ensure that all Level 2 measures were accessible to clinicians and researchers without cost. The lack of suitable freely available assessments explains why some Level 2 measures were omitted (e.g., dissociation and cognition/memory problems for adults). DSM-5 developers included Level 2 items only after careful consideration and discussion, but it may be useful in the future to contemplate whether development and inclusion of Level 2 measures for *all* domains could be beneficial.

Psychosis and suicidal ideation and behaviors are two domains on the adult Level 1 CC Symptom measure without self-report Level 2 measures, although they do have clinician-completed Level 2 measures (8). For psychosis, the clinician-completed measure might be warranted when impaired insight – a common symptom in psychosis – is present (19). Impaired insight can significantly impact the self-reporting of psychiatric symptoms, compliance with treatment, and prognosis in psychosis and across all mental disorders. As such, the inclusion of a Level 1 insight domain with associated Level 2 measures to the battery of DSM-5 CC Symptom measures may be beneficial in the future.

Information on the clinical utility of the DSM-5 CC measures was derived primarily from the use of electronic

versions of the measures, including electronic completion, scoring, and transmission of results (14). In the DSM-5 pilot study, only a partial electronic version was used (i.e., completion only), yet patients and clinicians still found the measures clinically useful (12). The feasibility and clinical utility of the pencil-and-paper versions still need to be demonstrated, though the positive findings on their electronic counterparts bode well.

Psychometrically sound and valid paper-and-pencil versions of these measures are important for places in the U.S. and around the world that do not have ready access to electronic technology. However, an electronic platform will facilitate the speed and convenience of administration if they are to be adopted for use in future psychiatric care, underscoring the importance of the results from the DSM-5 field trials (7,14).

CONCLUSIONS

In summary, efforts to include a standardized and freely available battery of dimensional measures into DSM-5 represent an important step in moving the field away from a rigid, categorical conceptualization of psychopathology. Further refinements to the DSM-5 CC Symptom measures are warranted, as indicated by field trial testing (7,13,14), but the existing battery dovetails nicely with ongoing efforts supported by the National Institute of Mental Health's Research Domain Criteria project to better integrate basic science and neurobiology – including the use of dimensional assessments of observable and neurological symptoms – into the psychiatric nosology (4). Dimensional assessments also may provide a way to reduce diagnostic complexity and comorbidities by giving clinicians a better way to capture gradients within a disorder – such as co-occurring symptoms – rather than forcing them into categorical decision-making.

These dimensional assessments map on nicely with the mandates of the US Patient Protection and Affordable Care Act (15) and may offer a glimpse into what the future of psychiatric care will look like. As refinements on these measures continue, the goal is to move the field closer to a more accurate and fully informed understanding of mental disorders and the experiences of the individuals who live with them.

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