Clinical Usefulness of the Diagnostic Manual-Intellectual Disability for Mental Disorders in Persons With Intellectual Disability: Results From a Brief Field Survey

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Objective: The National Association for the Dually Diagnosed, in collaboration with the American Psychiatric Association, adapted the DSM-IV-TR for use with individuals with intellectual disability. This article presents the findings of a study to examine the utility of the *Diagnostic Manual-Intellectual Disability* (DM-ID) in clinical practice.

Method: In a survey conducted during the summer of 2006, clinicians reported on the extent to which the DM-ID was user friendly, whether it allowed the clinician to arrive at an appropriate diagnosis of the patient, if the clinician was able to arrive at a more specific diagnosis than with the DSM-IV-TR, and if it helped avoid the use of "not otherwise specified" (NOS) diagnostic categories. Demographic information about the clinicians and the patients was obtained.

Results: Data from 63 clinicians and 845 patients with intellectual disability were included in the study. The patients' level of intellectual disability was approximately evenly divided among the categories of mild, moderate, and severe/profound. The DM-ID was rated as "easy" or "very easy" to use in over 68% of the 845 responses. The positive response to the DM-ID did not vary significantly across levels of intellectual functioning. Clinicians also indicated that the DM-ID helped them avoid the use of the "NOS" diagnosis category, resulting in a more specific diagnosis.

Conclusions: The DM-ID is a useful adaptation of the DSM-IV-TR for persons with intellectual disability. Professionals indicated that it was easy to use, resulted in accurate diagnoses, and can reduce the use of the NOS category. Further research is needed to evaluate the reliability and validity of the DM-ID.

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Existing psychiatric nosology systems fall short when they are applied to persons with intellectual disability. To help clinicians make specific psychiatric diagnoses in persons with intellectual disability, the National Association for the Dually Diagnosed (NADD), in association with the American Psychiatric Association (APA), adapted the DSM-IV-TR for use with individuals with intellectual disability. This study reports on the clinical usefulness of the *Diagnostic Manual-Intellectual Disability: A Clinical Guide for Diagnosis of Mental Disorders in Persons with Intellectual Disability* (DM-ID).[1]

Background

As many as one third or more of children and adults with intellectual disability have signs and symptoms that warrant a psychiatric diagnosis.[2–5] Although psychiatric disorders in persons with intellectual disability are common, they are often not appropriately identified.[6] Determining an accurate psychiatric diagnosis becomes especially difficult the more severe the level of intellectual functioning.[7]

Often people with intellectual disability who exhibit psychiatric problems are denied services or receive inappropriate treatment and services.[8] A key problem is the absence of a diagnostic system that is complementary to DSM-IV-TR[9] and appropriate for clinical use with the diverse population of people with intellectual disability.[10,11] As a result, individuals may receive no psychiatric diagnosis even when a mental disorder exists or they may receive an inaccurate or inappropriate diagnosis.

There are a number of factors that contribute to the difficulty of making an accurate diagnosis in people with intellectual disability. Symptoms of psychiatric disorders are often expressed differently in people with intellectual disability. Sovner[12] identified 4 terms that represent factors that are common in persons with intellectual disability that can create difficulties in examination and interpretation of symptoms during the mental health interview: (1) *baseline exaggeration* refers to the increase in frequency and intensity of a preexisting maladaptive behavior, (2) *intellectual distortion* is the misinterpretation of unusual speech or thought processes when they are due to poor cognitive or communication skills, (3) *psychosocial masking* refers to the effect of unsophisticated clinical presentation due to impoverished social skills and life experience that creates difficulty in establishing illness features and target symptoms, and (4) *cognitive disintegration* is the misinterpretation of a patient's extreme reaction to stress. Another diagnostic challenge is "diagnostic overshadowing."[13] Having a diagnosis of intellectual disability can overshadow a person's coexisting mental disorders and may predispose practitioners to overlook the presence of psychopathology because unusual behavior is attributed by the clinician to being artifacts of developmental delay. For example, a person with profound intellectual disability, who becomes very withdrawn and asocial, might be less likely to be diagnosed with depression than would a person with average intelligence.

Nosology and Diagnosis of Mental Illness

Classification systems are generally either categorical or dimensional. The case has previously been made that categorical, dimensional, and etiologic frameworks should be integrated in view of the complexities of psychiatric diagnosis in people with intellectual disability.[14] Nonetheless, both of the 2 main systems, DSM-IV-TR and the International Classification of Diseases, 10th Revision, Diagnostic Criteria for Research (ICD-10-DCR),[15] are categorical, operationalized systems, which do, however, bring the advantage of improving reliability of clinical diagnosis. While the systems may have utility for people with mild intellectual disability/good communication skills, both systems have inherent weaknesses in their application to people with intellectual disability. Several researchers have previously commented on both specific and general conceptual difficulties.[14,16–19]

Neither system adequately addresses the issues of problem behaviors, behavioral phenotypes, inclusion of intellectually complex items within categories, or the pathoplastic effect that intellectual disability has on the psychopathology that presents within categories. The ICD-10-DCR provides further confusion in the personality and behavioral disorders categories and in the other mental disorders due to brain disease, damage, and dysfunction categories. The instructions could be interpreted as requiring the use of these categories if a person has a psychiatric disorder with epilepsy and/or intellectual disability, which introduces the risk of incomplete assessment and therapeutic nihilism. Sturmey[16] has previously highlighted the issues associated with the minimal chronological/mental age requirements included in DSM, e.g., elimination disorders, which describe when a presentation is developmentally inappropriate. Some behaviors regarded as pathological may be developmentally normal in adults with intellectual disability. Additionally, developmental models have limitations, such as the assumption that the development of a person with intellectual disability is the same as that for a person with average intelligence but delayed. As this is not necessarily the case, this assumption complicates the judgment of what is "developmentally appropriate."

The DM-ID was produced to complement DSM-IV-TR. As well as providing information to help with the diagnostic process, it provides clear examples of how items should be interpreted when used on people with intellectual disability, addressing the pathoplastic effect of intellectual disability on psychopathology. The *DC-LD: Diagnostic Criteria for Psychiatric Disorders for Use with Adults with Learning Disabilities/Mental Retardation* (DC-LD)[20] provides a classificatory manual that complements the ICD-10-DCR. It uses a hierarchical approach in order to place problem behaviors within the diagnostic framework, provides clear instructions regarding organic disorders and behavioral phenotypes, has items within categories that accommodate the pathoplastic effect of more severe intellectual disability, and replaces some self-report items with observable items. The DM-ID does not introduce categories for problem behaviors, and this difference between DM-ID and DC-LD highlights the existing controversy surrounding the nosologic status of problem behaviors.

The DSM-IV-TR recognizes the need to modify some diagnostic criteria for children because the symptom profile of some disorders differs in children (for example, the substitution of "irritable mood" for "depressed mood" in the diagnostic criteria for major depressive episode and dysthymic disorder) and because some diagnostic criteria do not apply to children (for example, there is no requirement that children recognize that their fears are excessive or unreasonable for specific phobia). Likewise, the DM-ID was designed with a developmental perspective to aid the clinician in recognizing symptom profiles in adults with intellectual disability as well as in children with intellectual disability.

The DM-ID

The DM-ID, developed using an expert consensus process by the NADD in association with the APA, is a diagnostic manual designed to be an adaptation of the DSM-IV-TR. An enlarged version, *Diagnostic Manual-Intellectual Disability: A Textbook of Diagnosis of Mental Disorders in Persons with Intellectual Disability*,[21] is also available. Unlike the DM-ID clinical guide, the DM-ID textbook provides a review of (1) research and (2) pathogenesis and etiology.

Each diagnostic chapter has a comprehensive review of the research literature, and a standard rating of the quality and rigor of the research is applied. Additionally, each diagnostic chapter has a section on etiology and pathogenesis covering risk factors, biologic factors, psychosocial factors, and genetic syndromes. The tables of adapted criteria are identical in the DM-ID textbook and the DM-ID clinical guide.

In addition to adapting the DSM-IV-TR diagnostic criteria where appropriate, both versions of the DM-ID provide guidance for assessing and diagnosing specific disorders in individuals with intellectual disability. Information is provided on recognizing challenging behaviors of individuals with intellectual disability and on how to differentiate behavioral problems from psychiatric disorders. The DM-ID covers all major diagnostic categories of mental disorders as defined in the DSM-IV-TR.

METHOD

Field Study Methods

During the summer of 2006, a field study of the DM-ID clinical guide was conducted to assess its clinical usefulness. A brief clinician survey was developed that included questions such as whether the DM-ID enabled the clinician to arrive at a more specific diagnosis than he or she would have arrived at with the DSM-IV-TR, whether the DM-ID was user friendly, and whether the DM-ID allowed the clinician to arrive at a psychiatric diagnosis that the clinician thought was appropriate for the patient.

Participants and Participant Solicitation

Clinicians who are responsible for diagnosing psychiatric illness in individuals with intellectual disability agreed to use the DM-ID with their patients and provide feedback on the manual's clinical usefulness. The participation of these clinicians was requested (1) at the NADD International Congress held in Boston, Mass., March 15 through 18, 2006; (2) through an e-mail solicitation to NADD members and to other individuals with prior contact with NADD or a known interest in individuals with intellectual disability; and (3) through a posted invitation on the NADD Web site. Clinicians were asked to use the DM-ID with a minimum of 20 clients.

The Survey Tool

The clinician survey was developed by the 4 DM-ID editors and the 10-member DM-ID advisory board. Part I of the survey tool provided information about the training and experience of each clinician who participated in the field trials. Part I also sought the clinician's assessment of how useful the DSM-IV-TR was when used with individuals who had intellectual disability and the clinician's reasons for this assessment.

Part II of the survey was to be completed separately for each patient after the clinician had used the DM-ID to arrive at a diagnosis. Demographic information about the client (age, gender, level of intellectual disability, mode of communication, new or previously seen patient, and living arrangements) was collected. A comparison of the DSM-IV-TR diagnosis and the DM-ID diagnosis (Axis I, II, and III) was recorded. Then several questions about use of the DM-ID with each patient were answered. Three yes/no questions were asked: (1) "Did the DM-ID allow you to come up with a more specific diagnosis than you would have with DSM-IV-TR?" (2) "Did the DM-ID allow you to arrive at a psychiatric diagnosis that you think is appropriate for this patient?" and (3) "Did you find the DM-ID allowed you to avoid using the NOS [not otherwise specified] category?" Three questions were asked on a scale of 1 to 5: (1) "Was the DM-ID easy to use (user-friendly) to arrive at a psychiatric diagnosis for this patient?" (2) "Did you find the DM-ID clinically useful in the diagnosis of this patient?" and (3) "For the diagnosis used for this patient, do you feel that the number of adapted criteria were too few/excessive?"

Open-ended comments about the ease of use, clinical usefulness, and positive or negative impressions by the clinician about the use of the DM-ID were also sought.

Analyses

Data were entered into a database and analyzed using SPSS for Windows, version 14 (SPSS Inc., Chicago, Ill.). Descriptive statistics were calculated to determine the characteristics of the clinician participants and their patients and the clinicians' impressions of the DM-ID regarding its use. Inferential statistics were calculated to investigate any differences in clinician opinion when using DM-ID with patients at different levels of intellectual disability, different levels of communication skills (verbal or nonverbal), and with different types of mental disorders (psychotic, affective, anxiety, and pervasive developmental disorders).

RESULTS

A total of 63 clinicians from 11 different countries completed 845 DM-ID feedback surveys. Participating clinicians completed a feedback survey for each patient they assessed with the DM-ID. The mean number of surveys completed by clinicians was 13.3 surveys. Feedback surveys completed by DM-ID authors were excluded from the analyses reported herein. Participating clinicians were mainly psychologists (42.9%) or psychiatrists (31.7%). The remaining 25.4% of participants represented a variety of professions, including psychology assistant/counseling (N = 2), social work (N = 2), nursing (N = 3), and a medical registrar (N = 1). Clinicians reported an average of 16 years posttraining experience in mental health practice and an average of 12.4 years of experience working with DSM diagnoses in people with intellectual disability. Clinicians with 10 or fewer years of experience in mental health practice returned 40% of the records, clinicians with 11 to 20 years of experience returned

Table 1. Clinician Impressions of the *Diagnostic Manual-Intellectual Disability* (DM-ID) for New Patients, Follow-Up Patients, and Both Groups Combined[a,b]

Item	New Patients, % (N = 121)	Follow-Up Patients, % (N = 687)	Both Groups, % (N = 845)
Was the DM-ID easy to use (user-friendly)?	73.6	68.2	67.9
Did you find the DM-ID clinically useful in the diagnosis of this patient?	62.0	50.7	51.7
Did DM-ID allow you to arrive at an appropriate psychiatric diagnosis for this patient?	82.6	82.9	83.1
Did DM-ID allow you to come up with a more specific diagnosis than you would have with DSM-IV-TR?	40.0	36.2	36.5
Did the DM-ID help you avoid using the NOS category?	66.4	59.4	60.3

[a]Number of responses for individual items ranged from 806 to 844. The number of responses to the item that identified patients as new or follow-up equalled 808.
[b]Values represent the percent of endorsed cases (yes response).
Abbreviation: NOS = not otherwise specified.

Table 2. Clinician Impressions of the *Diagnostic Manual-Intellectual Disability* (DM-ID) by Discipline (% yes)

Item	Psychiatrist	Psychologist
Was the DM-ID easy to use (user-friendly)?	70.5	65.5
Did you find the DM-ID clinically useful in the diagnosis of this patient?	50.9	51.7
Did DM-ID allow you to arrive at an appropriate psychiatric diagnosis for this patient?	82.3	81.3
Did DM-ID allow you to come up with a more specific diagnosis than you would have with DSM-IV-TR?[a]	40.5	31.6
Did the DM-ID help you avoid using the NOS category?[b]	58.1	48.6

[a]$\chi^2 = 4.98$, $p < .05$.
[b]$\chi^2 = 5.11$, $p < .05$.
Abbreviation: NOS = not otherwise specified.

Table 3. Clinician Impressions of the *Diagnostic Manual-Intellectual Disability* (DM-ID) by Level of Intellectual Disability (% yes)

Item	Mild (N = 305)	Moderate (N = 237)	Severe/ Profound (N = 287)
Was the DM-ID easy to use (user-friendly)?	72.4	68.6	62.6
Did you find the DM-ID clinically useful in the diagnosis of this patient?	74.9	67.8	66.0
Did DM-ID allow you to arrive at an appropriate psychiatric diagnosis for this patient?	85.6	83.3	80.2
Did DM-ID allow you to come up with a more specific diagnosis than you would have with DSM-IV-TR?	36.1	38	35.9
Did the DM-ID help you avoid using the NOS category?	63.2	63.3	54.9

Abbreviation: NOS = not otherwise specified.

33% of the records, and 27% of the records were returned by clinicians with more than 20 years' experience.

The majority of patients were male (61.2%) and ranged in age from 6 to 89 years (mean = 39.2, SD = 14.7). The severity of intellectual disability was rated as mild (37.0%), moderate (28.8%), or severe/profound (34.2%). The majority of patients communicated with other people verbally (73.2%); others used assisted devices (1.4%), sign language (6.9%), or other modes of communication. Patients were reported to live in small-group (≤ 15 persons) residences (61.3%), large-group (≥ 16 persons) residences (25.3%), or with family (13.4%). The majority of patients who were assessed with the DM-ID had been seen previously by the clinician (85%).

As shown in Table 1, clinicians had very positive impressions of the DM-ID. The DM-ID was rated "easy" or "very easy" to use (user-friendly) by 67.9% of respondents. Clinicians reported that the DM-ID was clinically useful, especially when diagnosing new patients (62%; $\chi^2 = 8.18$, $p < .01$). That is, this finding indicates that, as a supplement to the DSM-IV, the DM-ID was viewed as being clinically useful in nearly two thirds of the cases.

The clinicians who participated in this study varied in experience level. We found very small correlations between clinicians' impressions of the DM-ID and their years of mental health experience ($.007 \le r \le .169$) and their years of experience applying DSM diagnoses to persons with intellectual disability ($.026 \le r \le .128$). Mostly, clinician impressions of the DM-ID did not vary significantly as a function of the clinician's discipline (Table 2). The 2 largest groups, psychiatrists and psychologists, were compared. Both groups reported favorable impressions, with psychiatrists more likely to indicate that the DM-ID allowed them to arrive at a more specific diagnosis compared to DSM-IV-TR ($\chi^2 = 4.98$, $p < .05$) and, similarly, that it helped them avoid using the NOS category ($\chi^2 = 5.11$, $p < .05$).

As shown in Table 3, clinician impressions did not vary significantly across levels of intellectual disability. Further analyses revealed that the DM-ID was rated more positively when patients were verbal as opposed to nonverbal in terms of its helping the clinician arrive at a more appropriate diagnosis ($\chi^2 = 4.97$, $p < .05$). Although we did not ask clinicians to describe how they arrived at a diagnosis when the patients were nonverbal, we assume that they relied more on direct observation, review of reports, and interview with care providers to make a diagnosis.

Our last series of analyses compared clinician impressions when using the DM-ID to diagnose patients into 4 broad diagnostic categories: psychotic disorder, mood disorder, anxiety disorder, and pervasive developmental disorder (Table 4). One-way analyses of variance were computed for the 5 survey questions across 4 main diagnostic

Table 4. Clinician Impressions of the *Diagnostic Manual-Intellectual Disability* (DM-ID) by Diagnostic Category (% yes)[a]

Item	Psychotic Disorder (N = 136)	Mood Disorder (N = 154)	Anxiety Disorder (N = 97)	PDD (N = 109)
Was the DM-ID easy to use (user-friendly)?	76.1	72.6	81.8	66.4
Did you find the DM-ID clinically useful in the diagnosis of this patient?[b]	39.9	63.7	70.7	40.9
Did DM-ID allow you to arrive at an appropriate psychiatric diagnosis for this patient?	81.9	87.9	90.9	85.5
Did DM-ID allow you to come up with a more specific diagnosis than you would have with DSM-IV-TR?[c]	21.0	37.6	45.5	23.6
Did the DM-ID help you avoid using the NOS category?	63.8	56.1	61.6	51.8

[a]N = 496; many diagnostic categories had insufficient sample size for meaningful comparison.
[b]F = 17.78, df = 3,365; p < .001.
[c]F = 7.79, df = 3,492; p < .001.
Abbreviations: NOS = not otherwise specified, PDD = pervasive developmental disorder.

Table 5. Changes in Diagnosis from DSM-IV-TR to the *Diagnostic Manual-Intellectual Disability* (DM-ID)[a,b,c,d]

Description of Change	Anxiety Disorder	Mood Disorder	Psychotic Disorder	PDD
Change from NOS to specific diagnosis in same broad category	15	42	9	8
Change from NOS to specific diagnosis in a different broad category	2	1	15	2
Change from one specific diagnosis to another in the same broad category	2	11	5	3
Change to a specific diagnosis in a different broad category	3	1	6	1
No. of new diagnoses by DM-ID	10	4	2	7

[a]Records were included only if the clinician responded yes to the question, "Did the DM-ID allow you to come up with a more specific diagnosis than you would have with DSM-IV-TR?" *and* the clinician provided different diagnoses using DM-ID versus DSM-IV-TR.
[b]Diagnoses from the DSM-IV-TR determined the diagnostic category. For example, if DSM-IV-TR yielded a diagnosis of anxiety disorder NOS and the DM-ID yielded a bipolar I diagnosis, this change is represented in the second row, first column.
[c]This table was calculated at the diagnosis level, not at the patient level. For example, if the DSM-IV-TR yielded 2 separate NOS diagnoses and the DM-ID yielded 2 specific diagnoses, we counted 2 changes for that patient.
[d]For the sake of clarity, certain diagnostic changes are not captured in this table. For example, this table does not capture diagnostic changes if the DSM-IV-TR yielded a diagnosis outside the four broad categories of anxiety disorder, mood disorder, psychotic disorder, and pervasive developmental disorder. However, if the DM-ID yielded a diagnosis in 1 of those categories when none was given using the DSM-IV-TR, we recorded that as a new diagnosis by DM-ID in the category.
Abbreviations: NOS = not otherwise specified, PDD = pervasive developmental disorder.

categories. Significant differences were found in 2 items: "Did you find the DM-ID clinically useful in the diagnosis of this patient?" (F = 17.78, df = 3,365; p < .001) and "Did the DM-ID allow you to come up with a more specific diagnosis than you would have with DSM-IV-TR?" (F = 7.79, df = 3,492; p < .001). Post hoc comparisons for both items revealed the following pattern (anxiety = mood > psychosis = pervasive developmental disorder).

We were interested in exploring the types of diagnostic changes clinicians made when using DM-ID versus DSM-IV-TR, especially since 36.5% of clinicians indicated that DM-ID allowed them to arrive at a more specific diagnosis. Table 5 reveals patterns in diagnostic changes according to the 4 broad diagnostic categories discussed previously: anxiety, mood, psychotic, and pervasive developmental disorders. We present changes in diagnosis for cases when clinicians had indicated that the DM-ID allowed them to arrive at a more specific diagnosis than they would have with DSM-IV-TR. These cells were computed in the following manner:

1. Records were included only if the clinician responded yes to the question, "Did the DM-ID allow you to come up with a more specific diagnosis than you would have with DSM-IV-TR?" *and* the clinician provided different diagnoses from DM-ID and DSM-IV-TR.
2. The diagnostic category column was determined by DSM-IV-TR diagnoses. For example, if DSM-IV-TR yielded a diagnosis of anxiety disorder NOS and the DM-ID yielded a bipolar I diagnosis, this change is represented in the second row of the first column in Table 5: "change from NOS to specific diagnosis in a different broad category."
3. This table was calculated at the diagnosis level, not the patient level. For example, if the DSM-IV-TR yielded 2 separate NOS diagnoses and the DM-ID yielded 2 specific diagnoses, we counted 2 changes for that patient.
4. For the sake of clarity, certain diagnostic changes are not captured in this table. For example, this table does not capture diagnostic changes if the DSM-IV-TR yielded a diagnosis in a category other than the 4 broad categories anxiety, mood, psychotic, and pervasive developmental disorders. However, if the DM-ID yielded a diagnosis in 1 of those categories when none was given using the DSM-IV-TR, we recorded that as a new diagnosis by DM-ID in the category.

DISCUSSION

The introduction of the DM-ID culminates a lengthy effort by the NADD to improve the quality of psychiatric diagnosis in individuals across the spectrum of intellectual

disability. Publication of the DM-ID not only recognizes the difficulty inherent in providing valid and reliable psychiatric diagnoses for persons with comorbid intellectual disability and psychiatric illness but also provides specific guidelines and modified diagnostic criteria to address this difficulty. Prior to its publication, the NADD undertook an international survey of clinicians practicing in the field of dual diagnosis, designed to assess the applicability and usefulness of these modified diagnostic criteria.

The results of this survey support the overall usefulness of the DM-ID across a broad spectrum of clinicians with varying years of clinical experience. Although clinical experience is a recognized advantage in nearly all areas of medical and psychiatric practice, an "ideal" diagnostic system would be one in which utility would not necessarily be influenced by or be dependent on the discipline or the experience of the practitioner. The study found only small correlations between the experience level of the respondent (years of mental health work or years working in dual diagnosis) and perceived utility (ease of use, specificity of diagnosis, avoidance of NOS category).

Respondents

Most respondents were either psychologists (42.9%) or psychiatrists (31.7%), with the remaining 25% composed of a variety of other clinician professions. A significant majority of the respondents reported at least 10 years of experience working with individuals with comorbid psychiatric illness. It is also noteworthy that 85% of subjects evaluated and reported were follow-up patients and not initial or first-time evaluations. This selection bias suggests that respondents may not have evaluated sufficient numbers of new patients within the time allotted for submitting surveys. Alternatively, the high percentage of well-known follow-up patients suggests that respondent clinicians relied upon individuals already assessed using the DSM-IV-TR for comparison.

In addition, the authors collapsed the data and compared responses among psychiatrists and psychologists working in the field. Although there were some differences between psychologists and psychiatrists employing the DM-ID, nearly two thirds of both groups found the DM-ID easy to use, and four fifths of both groups found the DM-ID provided an appropriate psychiatric diagnosis. The differences between the 2 groups reached statistical significance in 2 areas: perceived specificity of diagnosis and avoidance of NOS diagnoses, with more psychiatrists than psychologists favoring the DM-ID in these areas. Whether this represents actual differences in the impressions of the DM-ID between the 2 disciplines or differences in the perceived importance of these issues from a clinical perspective remains open for study.

Subjects

The large sample of subjects provided a high level of clinical diversity to the survey. The subjects were nonrandomly selected in terms of level of intellectual disability and of diagnosis. Nearly two thirds were male, a proportion that may accurately represent the clinical practice of dual diagnosis. The level of intellectual disability of subjects also differed from the population-wide prevalence rates for mild, moderate, and severe/profound intellectual disability. Our sample consisted of nearly equal percentages of subjects with mild (37.0%), moderate (28.8%), and severe/profound (34.2%) disability. We have no data on the process respondents used to select subjects but suspect that clinicians selected individuals from across the spectrum of intellectual disability in order to reflect subject distribution seen in a real-world dual-diagnosis practice. In spite of the issue of intellectual disability distribution, the results of the survey attest to the usefulness of the DM-ID across multiple levels of intellectual impairment (mild to profound intellectual disability).

Diagnostic Categories

Although this study did not provide a head-to-head comparison with the DSM-IV-TR, it nonetheless provides additional evidence that clinicians using the DM-ID were generally satisfied with the usefulness of criteria modifications in making a final diagnosis. Since the DSM-IV-TR is the current "gold standard" for psychiatric diagnosis, the view that the DM-ID could improve on the diagnostic accuracy of the DSM-IV-TR appears important. In general, respondents perceived the modified criteria in a highly favorable light. In written comments, participants endorsed the usefulness of both the modified criteria and the explanatory text that accompanies each criterion set. Future studies will be needed to explore whether certain criteria modifications were more important than others in contributing to the observation by the one third of respondents who found the DM-ID more useful than the current DSM-IV-TR.

The data suggest that the DM-ID was found useful for distinguishing mood, anxiety, psychotic, and pervasive developmental disorders across the spectrum of intellectual disability. There was also a statistically significant advantage reported for the DM-ID as clinically useful when used to diagnose new patients in comparison to patients already known. To a statistically significant degree, respondents also rated the DM-ID more positively when applying it to individuals with verbal skills compared to peers with other forms of communication or no communication. This finding is not surprising. Much of the DSM-IV-TR is dependent on the ability of the patient to communicate his or her symptoms so that persons who lack this ability make diagnosing more challenging to the clinician. Because nonverbal individuals with severe/profound intellectual disability present such a challenge for clinicians, more research is needed to define the strengths and weaknesses of the DM-ID for this population. However, present trends suggest that the DM-ID helps the clinician arrive at

a more specific diagnosis (than might be possible with the DSM-IV-TR) for both new and follow-up patients with severe/profound intellectual disability.

Although respondents acknowledged the DM-ID's global usefulness in reaching an appropriate diagnosis, there were additional differences in perceived utility across diagnostic categories. The data suggest that clinicians found greater diagnostic specificity when assessing anxiety and mood disorders compared to psychotic disorders and pervasive developmental disorder. This finding suggests that diagnostic comfort levels decline in the face of greater clinical heterogeneity (psychosis and pervasive developmental disorder) relative to more clearly defined mood and anxiety disorders. Future studies might focus on defining which issues increase or decrease the comfort level and diagnostic confidence of clinicians, especially the ones surrounding ambiguities about hallucinations and delusions or boundary issues between the pervasive developmental disorders.

Data from Table 5 suggest that the DM-ID is helpful in decreasing the use of the NOS diagnoses by better defining specific psychiatric syndromes. The DM-ID was particularly useful in fine tuning diagnoses within the mood disorder category. Clinicians using the DM-ID also reported an enhanced ability to discriminate between mood/anxiety disorders and other forms of psychopathology, which translated into higher rates of new anxiety and mood disorder diagnoses.

An ideal diagnostic system would have no demonstrable differential validity, i.e., would be equally valid and reliable regardless of the diagnostic category under consideration. However, in real-world use, the DSM-IV-TR recognizes that clinicians may be less confident in arriving at some diagnoses than others and allows several mechanisms for noting this lack of diagnostic certainty. In the DSM-IV-TR, these include the use of the specifier "provisional" or use of codes for diagnosis deferred and NOS. Across diagnostic groups, respondents thought the DM-ID helped them to avoid the use of the NOS category. The survey did not provide specific information on the dynamics of selecting this category in using the DM-ID. In the future, it is likely that better-defined and adapted diagnostic criteria may become increasingly important as the concepts of "spectrum" and "subsyndromal" psychiatric disorders are evolving.

Limitations

Even though the study had a high response rate from a wide range of clinicians active in the field of dual diagnosis, several of the volunteer respondents had previously participated in the development of the DM-ID. In order to minimize bias, we excluded data from these respondents from the statistical analysis presented in this article. The absence of these excluded data did not significantly change the favorable results reported. But even with these modifications, the survey did not use a scientifically selected pool of respondents. Future field testing of the validity and reliability of the DM-ID should use specific unbiased selection methodology.

This report presents a preliminary analysis of a nonrandomized sample of clinicians active in the field of dual diagnosis. Although the survey did not examine the scientific validity or reliability of the modified criteria, it did demonstrate the DM-ID's usefulness for clinicians across the spectrum of disciplines and levels of experience and for a variety of patients with all levels of developmental disability. The survey did not undertake a head-to-head comparison between the criteria modifications used in the DM-ID and the existing criteria available in the DSM-IV-TR. Such comparison studies, as well as formal field testing, will be needed for validating and establishing the reliability of the modified criteria outlined in the DM-ID.

CONCLUSION

Individuals with intellectual disability commonly have comorbid psychiatric illness; perhaps as many as one third have this dual diagnosis. The presence of intellectual disability makes accurate psychiatric assessment more challenging and, sometimes, nearly impossible. This is particularly true for persons with more severe and profound intellectual disability and those without communicative language that can aid in their assessment. Persons with mild levels of intellectual disability are typically more easily assessed and may often be readily diagnosed using traditional methodologies, such as the DSM-IV-TR.

To address the needs of those with more significant intellectual disability, the NADD, in association with the APA, has recently published the *Diagnostic Manual-Intellectual Disability*, which offers criteria modified or adapted from the DSM-IV-TR. Prior to publication, while available in draft form, the NADD surveyed a number of clinicians regarding their opinions about the DM-ID in the areas of clinical utility, ease of use, and specificity of diagnosis. Clinician feedback was substantively positive, and this core positive response was maintained across levels of intellectual disability and specific psychiatric diagnoses. Respondents reported that the DM-ID appeared to permit more specific psychiatric diagnoses in anxiety and mood disorders compared to psychotic disorders and pervasive developmental disorder.

While the survey methodology had several limitations, the fact that there were some significant differences in ease-of-use, apparent utility, and across diagnoses is of interest. These preliminary data suggest that the DM-ID may have specific advantages over the current DSM-IV-TR in providing diagnostic assessment of individuals with intellectual disability.

Future efforts should focus on direct comparisons between the DM-ID, the DSM-IV-TR, and, perhaps, the DC-LD, which is utilized in the United Kingdom, across a variety of diagnoses, levels of intellectual disability, patient

verbal ability, clinician discipline, and other variables. Such studies should utilize standardized methodologies, including blinded, randomly assigned side-by-side assessments comparing the diagnostic systems across large samples of patients and clinicians.

REFERENCES

1. Fletcher R, Loschen E, Stavrakaki C, et al. Diagnostic Manual-Intellectual Disability (DM-ID): A Clinical Guide for Diagnosis of Mental Disorders in Persons With Intellectual Disability. Kingston, NY: NADD Press; 2007
2. Goldberg B, Gitta MZ, Puddephatt A. Personality and trait disturbances in an adult mental retardation population: significance for psychiatric management. Presented at the 9th World Congress of the International Association for the Scientific Study of Mental Deficiency; Aug 5–9, 1992; Gold Coast, Australia
3. Reiss S. Prevalence of dual diagnosis in community-based day programs in the Chicago metropolitan area. Am J Ment Retard 1990;94(6):578–585
4. Rutter M, Tizard J, Yule W, et al. Research report: Isle of Wight studies, 1964–1974. Psychol Med 1976;6:313–332
5. Cooper S-A, Smiley E, Morrison J, et al. Prevalence of and associations with mental ill-health in adults with intellectual disabilities. Br J Psychiatry 2007;190:27–35
6. Reiss S. Handbook of Challenging Behavior: Mental Health Aspects of Mental Retardation. Worthington, Ohio: ODS Publishing Corporation; 1994
7. Expert Consensus Guideline Series: Treatment of psychiatric and behavioral problems in mental retardation. Am J Ment Retard 2000;105(3):159–226
8. Fletcher RJ, Beasley J, Jacobson JW. Supportive service systems for people with dual diagnosis in the USA. In: Bouras N, ed. Psychiatric and Behavioural Disorders in Developmental Disabilities. Cambridge, UK: Cambridge University Press; 1999:373–390
9. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition, Text Revision. Washington, DC: American Psychiatric Association; 2000
10. Davidson PW, Cain NN. Overview. In: Cain NN, Holt G, Davidson PW, et al, eds. Training Handbook of Mental Disorders in Individuals With Intellectual Disability, Kingston, NY: NADD Press; 2006:1–13
11. Sturmey P. Classification: concept, progress and future. In: Bouras N, ed. Psychiatric and Behavioural Disorders in Developmental Disabilities and Mental Retardation. Cambridge, UK: Cambridge University Press; 1999:3–17
12. Sovner R. Limiting factors in using DSM-III criteria with mentally ill/mentally retarded persons. Psychopharmacol Bull 1986;22:1055–1059
13. Reiss S, Levitan GW, Szysko J. Emotional disturbance in mental retardation: diagnostic overshadowing. Am J Ment Defic 1982;86(6):567–574
14. Barnhill J. Can the DSM-IV be salvaged for individuals with severe intellectual disabilities? Ment Health Aspects Dev Disabil 2003;6:85–98
15. World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders: Diagnostic Criteria for Research. Geneva, Switzerland; 1993
16. Sturmey P. DSM-III-R and persons with dual diagnoses: conceptual issues and strategies for future research. J Intellect Disabil Res 1995;39:357–364
17. Sturmey P. Diagnostic-based pharmacological treatment of behaviour disorders in persons with developmental disabilities: a review and a decision-making typology. Res Dev Disabil 1995;16(4):235–252
18. Einfeld SL Aman M. Issues in the taxonomy of psychopathology in mental retardation. J Autism Dev Disord 1995;25(2):143–167
19. Cooper SA, Melville CA, Einfeld SL. Psychiatric diagnosis, intellectual disabilities and Diagnostic Criteria for Psychiatric Disorders for Use with Adults with Learning Disabilities/Mental Retardation (DC-LD). J Intellect Disabil Res 2003;47(suppl 1):3–15
20. Royal College of Psychiatrists: DC-LD: Diagnostic Criteria for Psychiatric Disorders for Use with Adults with Learning Disabilities/Mental Retardation. Occasional Paper OP 48. London, England: Gaskell; 2001
21. Fletcher R, Loschen E, Stavrakaki C, et al. Diagnostic Manual-Intellectual Disability (DM-ID): A Textbook of Diagnosis of Mental Disorders in Persons With Intellectual Disability. Kingston, NY: NADD Press; 2007

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