

# Commentary: Craving Diagnostic Validity in DSM-5 Substance Use Disorders

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Drs. Norko and Fitch examine questions raised by DSM-5 in the forensic context of criminal defendant diversion to treatment, where eligibility has commonly relied on the view that addiction to alcohol or drugs is distinct from alcohol or drug use, misuse, and abuse. The creation in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), of the new unidimensional spectrum diagnosis of Substance Use Disorder (SUD), which includes three Abuse criteria from DSM-IV, has resulted in a need to re-examine policies that evolved with the DSM-III-R/DSM-IV biaxial abuse-dependence conceptual paradigm. DSM-5 acknowledges the common usage of the term addiction to describe severe problems, and that some clinicians choose to use the word to describe more extreme presentations. Limiting the concept of addiction to the severe form of DSM-5 SUD would maximize validity and support for an expert opinion that an individual has an addiction, as well as facilitate research inquiry into the underlying psychobiological nature of addiction. However, in some contexts, such as criminal diversion, achieving such specificity at the expense of sensitivity may be undesirably restrictive if it excludes appropriate candidates. Future research and experience in both clinical and forensic settings are needed for a fuller understanding of the DSM-5 SUD diagnoses and associated real-world implications.

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Addiction is relevant in numerous contexts of civil and criminal law, and the imprecise fit between the concept of addiction and the diagnostic scheme of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM) has been one of the challenges faced by forensic psychiatrists in navigating the boundary between clinical psychiatry and the justice system. Previous editions of the DSM have been cited in court opinions more than 5,500 times and in legislation more than 320 times.<sup>1</sup> The "Cautionary Statement for Forensic Use of DSM-5" acknowledges the common use of DSM as "a reference for the courts and attorneys," but points out that the DSM was not developed to meet "all of the technical needs of the courts and legal

professionals" (Ref. 2, p 25). Therefore, "the use of DSM-5 should be informed by an awareness of the risks and limitations of its use in forensic settings," where "diagnostic information may be misused or misunderstood" (Ref. 2, p 25). These risks are particularly elevated by discontinuities between successive editions of the DSM. In their article in this issue of the *Journal*, Drs. Norko and Fitch<sup>3</sup> have raised an important and timely topic, as mental health systems, legal systems, and forensic psychiatrists adopt and integrate the new DSM-5, which was released in May 2013.

The specific area of concern for Norko and Fitch is the diversion of criminal defendants from prosecution to treatment settings on the basis of substance use disorders. In many jurisdictions, eligibility for diversion has been based on a distinction between addiction on one hand, and substance use, misuse, and abuse on the other. In certain contexts, addiction has been considered by the legal system to include an element of impairment of control, with correspondingly reduced criminal responsibility. By contrast, substance use, misuse, and abuse have been viewed simply as lifestyle choices, with correspondingly greater criminal respon-

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sibility. Eligibility for diversion from prosecution to treatment has generally required that a defendant have an addiction to a substance. Therefore, the diagnosis of addiction, or its equivalent in the DSM, has been necessary for criminal diversion. Norko and Fitch<sup>3</sup> describe steps taken by the Connecticut legislature to change its criminal diversion law in anticipation of the arrival of the new DSM-5, to address the problem stemming from the statute's previous definition of an alcohol- or drug-dependent person as "a person who has a psychoactive substance dependence on [alcohol or drugs] as that condition is defined in the most recent edition of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders."<sup>4</sup> As pointed out by the authors, the DSM-5 eliminates the diagnosis of Substance Dependence and creates a new diagnosis of "Substance Use Disorder" (SUD). However, although the changes made by the Connecticut legislature were admirably proactive and resolved the very specific practical problem stemming from the statute's wording, the solution chosen resurrects the general conceptual question about who should and should not be eligible for criminal diversion, as well as the DSM-5-specific question of which DSM-5 substance-related diagnosis should qualify for such eligibility. More precisely, given that addiction has traditionally been a conceptual requirement for criminal diversion, is the intent to continue to require that a defendant have an addiction to a substance, and if so, what DSM-5 diagnosis would best operationalize the concept of addiction in a valid fashion?

These questions also apply to numerous other forensic contexts in which addiction is relevant. In criminal cases, evidence of diminished control over behavior as a result of addiction may be presented for the purpose of mitigation at sentencing. Relevant areas of civil litigation include allegations that negligent prescribing practices or use of a manufactured product caused injury or death as a result of addiction or addiction-related comorbidity (e.g., accidental overdose, suicide). Damages assessment in a wrongful death due to any cause may include consideration of the presence of addiction in the deceased and consideration of the individual's longitudinal clinical course had the individual not died. Medical malpractice cases may allege impairment due to a physician's addiction, with the resulting negligence causing damage. Medical board actions against physicians can be based on impairment resulting from addic-

tion. Fraudulent nondisclosure of addiction may be alleged in a life insurance case involving denial of benefits. Termination of parental rights, child custody, and parental access cases may be influenced by the diagnosis of addiction in a parent. Eligibility to adopt children may be harmed by an addiction diagnosis of a prospective parent. In employment settings, there may be allegations of wrongful termination or failure to accommodate on the basis of an addiction diagnosis (e.g., to alcohol). Medical records that contain a diagnosis of addiction may create problems for job applicants to various governmental agencies and may undermine suitability to obtain security clearances in government or civilian occupations.

The DSM-5 Substance-Related Work Group (Work Group) made fundamental changes in the diagnosis of substance use disorders, particularly in moving from a more categorical approach to a more dimensional approach. As mentioned above, the DSM-IV diagnoses of Substance Abuse and Substance Dependence were combined into one diagnosis called Substance Use Disorder (SUD). In appreciating the significance of this change, it is important to point out that the Work Group eliminated the biaxial concept, which dates back over 30 years in the World Health Organization (WHO)<sup>5-7</sup> and was adopted by the third edition, revised (DSM-III-R) and the fourth edition (DSM-IV).<sup>8,9</sup> The biaxial concept called for the separation of the core psychobiological syndrome from substance-related problems: the dependence syndrome constituted one axis, and alcohol- or drug-related problems constituted the other. Room<sup>10</sup> noted that, in 1976, responding to concerns regarding the overly wide scope of definitions of the disease of alcoholism, which included consequences of drinking, Edwards and Gross<sup>11</sup> more narrowly defined the alcohol dependence syndrome around seven essential elements with an expectation of concurrence, and alcohol-related problems were excluded. They pointed out that in facilitating research, "one important priority is the sharper delineation of the actual syndrome" from "its natural histories and social setting," to determine the "psychobiological basis" of the dependence syndrome (Ref. 11, p 1061). As noted in the 1981 WHO Memorandum:

Not every individual who experiences impairment or disability related to drug consumption is suffering from drug

dependence. There is no conceptually satisfactory cut-off point to differentiate persons exhibiting drug-related, but not syndrome-related, disabilities from the remainder of the population . . . [Ref. 7, p 230].

Problems were created by the DSM-IV in its establishment of a hierarchical relationship between the diagnosis of Substance Dependence and Substance Abuse (i.e., that a diagnosis of Substance Dependence excludes a diagnosis of Substance Abuse), which was not part of the biaxial concept. Hasin *et al.*<sup>12</sup> detailed how this hierarchy resulted in incorrect assumptions regarding the relationship of Abuse and Dependence (e.g., that Abuse is the prodrome or a milder form of Dependence, or that all cases of Dependence also meet criteria for Abuse). Another problem in the DSM-IV involved diagnostic orphans (i.e., individuals who meet two criteria for Dependence and no criterion for Abuse, and therefore received neither diagnosis).<sup>12</sup> Yet another problem was the difference in reliability and validity between these two DSM-IV diagnoses. Substance Dependence had excellent reliability and validity, correlating with consumption, impaired functioning, comorbidity, and treatment utilization. In contrast, DSM-IV Substance Abuse had much lower reliability and validity, with nearly half the Abuse cases diagnosed with only one criterion, most commonly that of hazardous use.<sup>12</sup>

The Work Group chose not to address these problems through the elimination of the hierarchical relationship, by the elimination of the Abuse diagnosis, or by moving the Abuse diagnosis into the V Codes. Instead, the Work Group eliminated both Substance Dependence and Substance Abuse diagnoses, and combined their diagnostic criteria into a new diagnosis of DSM-5 SUD. More specifically, three of the four Abuse criteria were added to the Dependence criteria; legal problems was eliminated as being too infrequently endorsed; and craving was added as a new criterion, yielding a total of 11 criteria for the new Substance Use Disorder diagnosis. The Work Group cited psychometric research as its primary rationale: for example, latent class analysis of the combined Abuse and Dependence criteria, in the absence of a hierarchy, suggested that the criteria correlated with a single factor or two closely related factors.<sup>12</sup> In addition, an item-response theory model analysis of the combined criteria indicated unidimensionality.<sup>12</sup> Finally, the various criteria intermixed across the severity spectrum (with the exception of legal prob-

lems).<sup>12</sup> Saha *et al.*<sup>13</sup> found the latent structure of substance use disorders to be best described by two factors: substance dependence and a minor abuse factor highly correlated with dependence. The authors concluded that given “the high correlations between the factors and similar associations between most covariates and the dependence and abuse factors, the findings appear equivocal on the value of retaining separate factors” (Ref. 13, p 376). Thus, while the Work Group found justification in the psychometric research for blending the DSM-IV Abuse and Dependence criteria together into one overarching diagnosis, the resulting DSM-5 SUD diagnosis nevertheless has unproven validity. It blurs what have been believed by many to be important conceptual distinctions between an underlying psychobiological disturbance and substance use-related consequences, and has been criticized as “blind empiricism” (Ref. 14, p 871).

DSM-IV Substance Dependence has been credited as a “helpful unifying heuristic for clinicians, scientists and sufferers for more than 30 years, and has strong empirical support” (Ref. 15, p 892). Rather than being innovative, DSM-5’s merging of the Abuse criteria with the Dependence criteria is arguably regressive in moving back to the era of “hyperinflation of the scope of ‘alcoholism’” that predated the narrowing of dependence criteria by Edwards and Gross (Ref. 11, p 311). It also breaks with the biaxial concept that “problems experienced by substance users should not be part of the diagnosis of the core syndrome” (Ref. 14, p 870). In addition, it has been argued that the elimination of Abuse as a diagnostic category is problematic from a prevention perspective (i.e., there is a need for a diagnostic category that recognizes problematic and hazardous substance use), given that up to 50 percent of alcohol-related problems occur in individuals who do not have alcohol dependence.<sup>14</sup> This concern is particularly prevalent among adolescents and young adults.<sup>16</sup>

The DSM-5 diagnosis of Substance Use Disorder has a threshold of 2 of 11 criteria. The rationale provided by the Work Group is that this two-criteria threshold would result in the closest predicted approximation between the prevalence of the new single diagnosis of DSM-5 Substance Use Disorder and the combined prevalence of the two diagnoses of DSM-IV Substance Abuse and Substance Dependence, to “avoid a marked perturbation in prevalence without justification” (Ref. 12, p 841). However, as

pointed out by critics, DSM-5 field trials did not compare DSM-IV and DSM-5 prevalence rates for the same disorder through head-to-head diagnosis by the same clinician; no tests of predictive validity of the DSM-5 diagnoses were undertaken; planned tests of convergent validity were abandoned; and the threshold requirement for inter-rater reliability was lowered substantially.<sup>17,18</sup> Concern has been expressed about the two-criteria diagnostic threshold being “too lenient” and that it “would diagnose many whose substance involvement has questionable clinical significance, leading the [Substance Use Disorder] diagnosis away from mainstream neurobehavioral theory regarding what constitutes a mental ‘disorder’ and ‘addiction’”; and would allow “so much heterogeneity that the clinical and research utility of the diagnostic category would be greatly compromised” (Ref. 19, p 2008). It has been pointed out that a low diagnostic threshold runs the risk of false-positive diagnoses (i.e., misdiagnosis of individuals who do not have a substance use disorder).<sup>20</sup> Such an error in diagnosis could result from the inclusion of potentially overlapping criteria,<sup>21</sup> inaccurate endorsement of ambiguous criteria, or endorsement of criteria for reasons of social conformity,<sup>19</sup> social and cultural bias,<sup>22</sup> and lack of consideration regarding whether the combined endorsed criteria cause clinically significant distress or impairment.<sup>23</sup>

Much concern has been expressed about a “bias in the DSM-5 . . . to increase the sensitivity of psychiatric diagnosis and to reduce the specificity, by loosening the thresholds for existing diagnoses and introducing new diagnoses at the fuzzy and populous boundary with normality” (Ref. 21, p 1). A potential consequence is the “relabeling” of a large number of individuals as “having a mental disorder,” despite their being “best considered to be a part of normality” (Ref. 24, p 474). Apprehension has been expressed about potential application of a “stigmatized and loaded label to youth whose problem severity may be mild and whose substance use pattern may be more intermittent than regular and more likely to quit” (Ref. 20, p 883).

Norko and Fitch<sup>3</sup> describe the approach taken by the Connecticut legislature before the publication of the final form of DSM-5, which was effectively to choose an intermediate cutoff point of 4 of 11 possible DSM-5 diagnostic criteria for Substance Use Disorder as the required threshold for diversion to treatment by changing the statute’s wording to

“meets the criteria of moderate or severe . . . use disorder.”<sup>25</sup> They note that this choice was based on a personal communication from the Work Group chair before the publication of DSM-5 that the same ICD-9/ICD-10 code would apply to diagnoses of both moderate and severe SUDs, and that this ICD-9 code would be the same as had been assigned to DSM-IV Substance Dependence. This personal communication was inferred to support the notion that DSM-IV Substance Dependence would be the equivalent of the combination of DSM-5 diagnoses of moderate SUD and severe SUD. Norko and Fitch<sup>3</sup> cite several papers that calculated rough equivalence between the prevalence of DSM-IV Substance Dependence and the combined predicted prevalences of the DSM-5 diagnoses of moderate and severe SUD. However, the papers cited did not compare the prevalences of actual diagnoses of real patients made by the same clinician on the basis of the DSM-IV and DSM-5 guidelines in head-to-head comparisons. In addition, the papers did not take into consideration two aspects of clinical diagnosis required by the DSM: temporal clustering (i.e., the syndrome comprises criteria that occur within a 12-month period) and the generic threshold requirement for diagnosing any mental disorder. The DSM-5, in its “Use of the Manual” section, states that its diagnoses “must meet the definition of a mental disorder” (Ref. 2, p 20), and a “generic diagnostic criterion requiring distress or disability has been used to establish disorder thresholds, usually worded as ‘the disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning’” (Ref. 2, p 21). Per Dr. Marc Schuckit, one of the Work Group members: “It is important to note that even the mild substance use disorder. . . can only be diagnosed in the context of significant impairment in life functioning or distress to the individual or those around them” (Ref. 26, p 662). Simply tallying individual criteria does not establish a DSM-5 SUD diagnosis.

Questions of prevalence notwithstanding, what DSM-5 diagnosis best captures the concept and phenomenon of “addiction” when there is no actual DSM-5 “addiction” diagnosis? The DSM-5 Work Group provided the following text discussion:

Note that the word *addiction* is not applied as a diagnostic term in this classification, although it is in common usage in many countries to describe severe problems related to compulsive and habitual use of substances. The more neutral term *substance use disorder* is used to describe the wide

range of the disorder, from a mild form to a severe state of chronically relapsing, compulsive drug taking. Some clinicians will choose to use the word *addiction* to describe more extreme presentations, but the word is omitted from the official DSM-5 substance use disorder diagnostic terminology because of its uncertain definition and its potentially negative connotation [Ref. 2, p 485; emphasis in original].

“Severe problems” and “extreme presentations” would be expected in diagnoses of severe SUDs.

It is likely that there would be relatively higher interrater reliability at the severe end of the SUD spectrum and that it would be valid from a mental health perspective to conclude that such patients have addictions. For example, in a published reanalysis of data obtained from patients in addiction treatment, of the 11 possible criteria of the DSM-5 SUD diagnosis, the modal number of criteria was 10 for alcohol, 10 for cocaine, and 10 for heroin.<sup>27</sup> Patients in addiction treatment would be likely to meet the generic diagnostic criterion of clinically significant distress and disability. Furthermore, it is likely that clinicians would diagnose DSM-5 Severe SUD in such individuals and also view these individuals as having an addiction. Another study of a largely substance-dependent population using semistructured interviews to assess for lifetime presence of DSM-IV and DSM-5 SUDs found that the two diagnostic systems agreed to a great extent on the absence of a diagnosis, and there was good correspondence between DSM-IV Dependence and DSM-5 Severe SUD.<sup>28</sup> For alcohol, cocaine, and opioids, the rates of DSM-5 Severe SUD among individuals with a DSM-IV Dependence diagnosis were 85, 91, and 93 percent, respectively. However, half of the DSM-IV Abuse diagnoses were mild SUD under DSM-5 and the other half were split equally into no diagnosis or moderate SUD, such that DSM-IV Abuse did not correspond with a single severity level of DSM-5 SUD. The authors concluded, “In research settings, the emphasis on dependence in, for example, pharmacotherapy trials and genetic studies, is likely to be replaced by an emphasis on severe SUDs” (Ref. 28, p 219).

The justice system has its own requirements regarding the translation of scientific knowledge and psychiatric diagnosis into legal decision-making, and this disparity between clinical and legal assumptions and goals is the core tension in forensic psychiatry. In the case of criminal justice diversion, policies regarding substance-using offenders evolved with the DSM-III-R/DSM-IV biaxial abuse-dependence

conceptual paradigm. Changing the paradigm in DSM-5 to a unidimensional spectrum has resulted in a need to re-examine these policies. The inclusion of DSM-IV Abuse criteria in the new DSM-5 SUD diagnostic criteria precludes a simple correlation between DSM-5 SUD and addiction. For example, with respect to an individual distressed about being arrested on drug charges, if the diagnostic criteria present include three former DSM-IV Abuse criteria, plus one additional criterion (e.g., tolerance), should that individual who now has a diagnosis of a DSM-5 Moderate SUD be considered to have an addiction? And should that individual be eligible for diversion? On the other hand, would a law excluding Moderate SUD be sacrificing sensitivity for specificity, with the undesirable consequence that some addicted defendants would be excluded from diversion? Will legislatures choose arbitrary cutoffs on the criteria count continuum to define diversion eligibility based on practicality, such as the implications for caseloads and budgetary costs, rather than the clinical finding that a defendant has an addiction? Such potential scenarios are possible, given the limited research on the DSM-5, as well as its dimensional approach to diagnosis,<sup>12</sup> which makes fuzzy the boundaries of underlying mental disorders.

Norko and Fitch<sup>3</sup> have presented a timely introduction to one of the many contexts in which forensic psychiatrists will inevitably be confronted with questions regarding the correlation between addiction and the DSM-5 diagnosis of SUD. Limiting the concept of addiction to the “severe” form of DSM-5 SUD would maximize validity and support for an expert opinion that an individual has an addiction. Furthermore, this approach would be likely to facilitate research inquiry into the underlying psychobiological nature of addiction. However, in some contexts, such as criminal diversion, achieving such specificity at the expense of sensitivity may be undesirably restrictive if it excludes appropriate candidates. Future research and experience in both clinical and forensic settings is needed for a fuller understanding of the DSM-5 SUD diagnoses and associated real-world implications, which in turn may lead to revisions in the DSM itself.

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References

1. Slovenko R: The DSM in litigation and legislation. *J Am Acad Psychiatry Law* 39:6–11, 2011
2. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*. Washington, DC: American Psychiatric Publishing, 2013
3. Norko MA, Fitch WL: DSM-5 and substance use disorders: clinical implications. *J Am Acad Psychiatry Law* 42:443–52, 2014
4. Conn. Gen. Stat. § 17a-680 (2013)
5. Edwards G, Gross MM, Keller M, *et al*: *Alcohol Related Disabilities*. WHO Offset Publication No. 32. Geneva: World Health Organization, 1977
6. Edwards G, Arif A, Hodgson R: Nomenclature and classification of drug- and alcohol-related problems: a WHO Memorandum. *Bull World Health Organ* 59:225–42, 1981
7. Edwards G: The alcohol dependence syndrome: a concept as stimulus to enquiry. *Br J Addict* 81:171–83, 1986
8. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*. Washington, DC: American Psychiatric Publishing, 1994
9. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised*. Washington, DC: American Psychiatric Publishing, 1987
10. Room R: Alcohol and drug disorders in the International Classification of Diseases: a shifting kaleidoscope. *Drug Alcohol Rev* 17:305–17, 1998
11. Edwards G, Gross MM: Alcohol dependence: provisional description of a clinical syndrome. *BMJ* 1:1058–61, 1976
12. Hasin DS, O'Brien CP, Auriacombe M, *et al*: DSM-5 criteria for substance use disorders: recommendations and rationale. *Am J Psychiatry* 170:834–51, 2013
13. Saha TD, Harford T, Goldstein RB, *et al*: Relationship of substance abuse to dependence in the U.S. general population. *J Stud Alcohol Drugs* 73:368–78, 2012
14. Babor TF: Substance, not semantics, is the issue: comments on the proposed addiction criteria for DSM-V. *Addiction* 106:870–2, 2011
15. Drummond C: The end of the dependence syndrome as we know it? *Addiction* 106:892–4, 2011
16. Kaminer Y, Winters KC: Proposed DSM-5 substance use disorders for adolescents: if you build it, will they come? *Am J Addict* 21:280–1, 2012
17. Welch S, Klassen C, Borisova O, *et al*: The DSM-5 controversies: how should psychologists respond? *Can Psychol* 54:166–75, 2013
18. Jones KD: A critique of the DSM-5 field trials. *J Nerv Ment Disease* 200:517–19, 2012
19. Martin CS, Steinley DL, Verges A, *et al*: The proposed 2/11 symptom algorithm for DSM-5 substance-use disorders is too lenient. *Psychol Med* 41:2008–10, 2011
20. Winters KC, Martin CS, Chung T: Substance use disorders in DSM-V when applied to adolescents. *Addiction* 106:882–3, 2011
21. Frances AJ, Nardo JM: ICD-11 should not repeat the mistakes made by DSM-5. *Br J Psychiatry* 203:1–2, 2013
22. Caetano R: There is potential for cultural and social bias in DSM-V. *Addiction* 106:885–7, 2011
23. Schuckit MA: Editor's corner: editorial in reply to the comments of Griffith Edwards. *J Stud Alcohol Drugs* 73:521–2, 2012
24. Batstra L, Frances A: Diagnostic inflation: causes and a suggested cure. *J Nerv Ment Dis* 200:474–9, 2012
25. Connecticut General Assembly: Public Act 13-208, § 22, approved June 21, 2013
26. Schuckit MA: Editor's corner: DSM-5—ready or not, here it comes. *J Stud Alcohol Drugs* 74:661–3, 2013
27. Hasin DS, Fenton MC, Beseler C, *et al*: Analyses related to the development of DSM-5 criteria for substance use related disorders, 2: proposed DSM-5 criteria for alcohol, cannabis, cocaine and heroin disorders in 663 substance abuse patients. *Drug Alcohol Depend* 122:28–37, 2012
28. Peer K, Rennert L, Lynch KG, *et al*: Prevalence of DSM-IV and DSM-5 alcohol, cocaine, opioid, and cannabis use disorders in a largely substance dependent sample. *Drug Alcohol Depend* 127: 215–19, 2013