Published in final edited form as:
Addiction. 2011 May ; 106(5): 882–897. doi:10.1111/j.1360-0443.2010.03334.x.

Commentary on O'Brien: Substance Use Disorders in DSM-V when Applied to Adolescents

Ken C. Winters
University of Minnesota, Chris S. Martin & Tammy Chung, University of Pittsburgh

Introduction

O'Brien and colleagues in the DSM-V workgroup have proposed draft diagnostic criteria for DSM-V Substance Use Disorders (SUDs) (1). These draft criteria eliminate the diagnosis of Substance Abuse and define a single SUD for various substance classes—such as "Alcohol Use Disorder" (AUD)—using a set of 11 symptoms. This commentary reviews the draft criteria in light of their application to adolescents.

Adolescence is a developmental period characterized by relatively high rates of substance use, as well as appreciably high rates of substance use disorders. Based on the 2008 NSDUH data set, 7.6% of 12–17 year olds met criteria for at least one DSM-IV SUD in the past year, and an additional 17% of teenagers, while not meeting an abuse diagnosis, still reported one or two substance-dependence criteria (2). As with adults, a SUD diagnosis is often needed for youth to be eligible to receive treatment for a substance use problem within the US health care system.

The proposed DSM-V criteria include some positive changes for defining SUDs among adolescents. The use of a combined criterion set to diagnose a single SUD makes sense for adolescents. Specifically, the criterion sets for DSMIV abuse and dependence have overlapping conceptual content (3), and do not differ systematically in prevalence, sensitivity, specificity, severity, or age of onset (4,5). Factor and latent class analyses indicate a single dimension of substance problems (4, 6, 7). We also support the decision to eliminate the "legal problems" symptom, which, in adolescents, was related to coexisting conduct disorder, and tended to be less relevant for female and younger teenagers (4). These changes have the potential to strengthen the validity of the SUD diagnosis for youth.

Potential Limitations with Proposed DSM-V SUD

There are nonetheless a number of limitations of the proposed changes. Specifically, some of the draft criteria have questionable validity when applied to adolescent substance users.

Tolerance

Tolerance to substances, particularly to alcohol, is a relatively mild symptom and can present without significant harm or distress. Indeed, it may be normative in adolescent and young adult drinkers (8), when individuals typically escalate their substance use from experimentation to more regular use. Tolerance implicitly references an undefined temporal comparison which makes it a developmentally sensitive criterion, such that it is much easier to meet this criterion earlier in the career of the substance user (9). Also, neuro-developmental changes during adolescence (10) may contribute to variability of developmental sensitivity to substances among teenagers who are only a few years apart in age (11).

Withdrawal

ithdrawal symptoms are a fairly rare phenomenon in adolescents because they generally only emerge after years of heavy drug use (12), withdrawal reflects severe substance problems and may have prognostic significance in the few adolescents who report it so its inclusion in DSM-V is useful. However, alcohol withdrawal has shown relatively high rates of endorsement and only a moderate association with levels of problem severity (6). Also, the DSM-IV definition of alcohol withdrawal requires only two of eight subcriteria, some of which may be confused with symptoms of hangover, producing false positive symptoms.

Hazardous Use

There is debate as to whether hazardous use reflects a compulsive pattern of use that is relevant across all substances, such as tobacco (13). In addition, the hazardous use criterion is somewhat developmentally-bound. Hazardous use is much more common in adults than among adolescents (2, 4) probably because adolescents have less access to automobiles than adults (by far the most common way for adolescents to meet this criterion).

Craving

The value of including the craving criteria when diagnosing adolescents is uncertain. There are clinical observations that many youth who have escalated to regular use report strong cravings (2,14) but the way in which this symptom is defined and operationalized may have a large effect on its observed prevalence (e.g., sign of continued appetitive urges or behaviors? withdrawal-related phenomenon?). More research is needed to examine the validity of craving as a criterion of SUDs among adolescents.

The Two-Symptom Threshold for SUD

The impact of the 2/11 threshold for SUD in youth deserves further research. Since some of the proposed DSM-V symptoms are mild, developmentally normative for teenagers, and/or easily misunderstood and over-endorsed (15), the proposed algorithm may include many mild cases, which do not reflect the classic definition of a compulsive pattern of substance use. This may unnecessarily apply 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 remit. A related problem is that the proposed threshold for SUD may include identify a very heterogeneous group of adolescents.

Summary

Despite some favorable changes, the proposed DSM-V SUD criteria do not go far enough in improving SUD diagnosis for youth. Some targeted developmental adjustments, including clearer operational symptom definitions (16), are needed to ensure that DSM-V validly identifies SUD across developmental periods. We recommend excluding the Hazardous Use criterion, clarifying the operational definitions of Tolerance, Withdrawal and Craving, and critically evaluating the diagnostic threshold for SUDs in adolescents.

References

1. O’Brien CP. Addiction and dependence in DSM-V. Addict. in press.
2. Martin CS, Chung T, Langenbucher JW. How should we revise diagnostic criteria for substance use disorders in the DSM-V? J Abnorm Psychol. 2008; 117(3):561–575. [PubMed: 18729609]
3. Martin CS, Winters KC. Diagnostic criteria for adolescent alcohol use disorders. Al Health Res World. 1998; 22:95–106.

4. Martin CS, Chung T, Kirisci L, Langenbucher JW. Item response theory analysis of diagnostic criteria for alcohol and cannabis use disorders in adolescents: Implications for DSM-V. J Abnorm Psychol. 2006; 115(4):807–814. [PubMed: 17100538]

5. Harrison PA, Fulkerson JA, Beebe TJ. DSM-IV substance use disorder criteria for adolescents: A critical examination based on a statewide survey. Am J Psychiatry. 1998; 155:486–492. [PubMed: 9545993]

6. Chung T, Martin CS. Classification and course of alcohol problems among adolescents in addictions treatment programs. Alcohol Clin Exp Res. 2001; 25(12):1734–1742. [PubMed: 11781506]

7. Chung T, Martin CS. What were they thinking? Adolescents' interpretations of DSM-IV alcohol dependence symptom queries and implications for diagnostic validity. Drug Alcohol Depend. 2005; 80(2):191–200. [PubMed: 15894432]

8. Chung T, Martin CS, Winters KC, Cornelius JR, Langenbucher JW. Limitations in the assessment of DSM-IV cannabis tolerance as an indicator of dependence in adolescents. Exp Clin Psychopharmacol. 2004; 12(2):136–146. [PubMed: 15122958]

9. O'Neill S, Sher KJ. Tolerance and withdrawal during early adulthood: A longitudinal perspective. Exp Clin Psychopharmacol. 2000; 8:493–508. [PubMed: 11127421]

10. Giedd JN. Structural magnetic resonance imaging of the adolescent brain. Ann N Y Acad Sci. 2004; 1021:77–85. [PubMed: 15251877]

11. Spear LP. The adolescent brain and age-related behavioral manifestations. Neurosci Biobehav Rev. 2002; 24:417–463. [PubMed: 10817843]

12. Langenbucher J, Martin C, Labouvie E, Sanjuan P, Bavley L, Pollock N. Toward the DSM-V: A withdrawal-gate model of alcohol dependence. J Consult Clin Psychol. 2000; 68(5):799–809. [PubMed: 11068966]

13. Hasin D, Paykin A, Endicott J, Grant B. The validity of DSM-IV alcohol abuse: drunk drivers versus all others. J Stud Alcohol. 1999; 60(6):746–755. [PubMed: 10606485]

14. Chung, T.; Martin, CS. Adolescent substance use and substance use disorders: Prevalence and clinical course. In: Kaminer, Y.; Winters, KC., editors. Clinical manual of adolescent substance abuse treatment. Washington, DC: American Psychiatric Association; 2010. p. 1-23.

15. Chung T, Martin CS, Winters KC, Langenbucher JW. Assessment of alcohol tolerance in adolescents. J Stud Alcohol. 2001; 62(5):687–695. [PubMed: 11702808]

16. Robins LN. Diagnostic grammar and assessment: translating criteria into questions. Psychol Med. 1989; 19:57–68. [PubMed: 2727211]