Combining Abuse and Dependence in DSM-5

Dear Editor:

The conceptual formulations of Griffith Edwards's *dependence syndrome* (Edwards and Gross, 1976) have had an enormous influence on the measurement of substance use disorders, particularly regarding the formulations of the alcohol and drug dependence categories in the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised* (DSM-III-R; American Psychiatric Association, 1987), DSM-IV (American Psychiatric Association, 1994), and the *International Classification of Diseases, 10th Revision* (ICD-10; World Health Organization, 1992). In a thoughtful letter (Edwards, 2012—p. 699 this issue), Dr. Edwards asks several important questions about substance use disorders in DSM-5. We are currently preparing a review article that goes into these issues and others in considerable detail. However, in the meantime, responding now to the specific issues raised by Dr. Edwards provides the rationale for some of the DSM-5 changes more rapidly and to a wider audience than would otherwise be possible, and this format also allows presentation of the material in a more narrative fashion.

Dr. O'Brien has responded regarding the terminology for the disorders (O'Brien, 2012—p. 705 this issue). Here, I address the concern about combining abuse and dependence, thereby eliminating the abuse category.

In DSM-III-R and DSM-IV, alcohol and drug dependence were indicated with a set of diagnostic criteria that overlapped substantially but not completely with the dependence syndrome criteria because some of the latter (e.g., salience, rapid reinstatement) could not be operationalized in a reliable, valid manner, despite concerted efforts to do so. The dependence criteria used in DSM-III-R and DSM-IV were shown to be highly reliable in many test–retest studies, across a variety of instruments, settings, and samples, as reviewed previously (Hasin et al., 2006).

A main difference between the dependence syndrome concept and DSM-III-R and DSM-IV was the relationship between dependence and abuse. Dr. Edwards conceptually differentiated the dependence syndrome from other substance-related physical, mental, and social disabilities in a bi-axial formulation (Edwards, 1986). In DSM-III-R and DSM-IV, the abuse category represented this second axis. As noted by Edwards and Gross (1976), substance-related physical, mental, and social disabilities often accumulate for the person who is dependent, and the greater the severity of dependence, the more likely these disabilities are to occur. This conceptualization does not suggest any sort of hierarchy between the dimensions, and in fact, predicts a high correspondence between the severity of dependence and disability indicators. However, DSM-III-R and DSM-IV established a diagnostic hierarchy in which abuse could only be diagnosed in the absence of dependence. When this hierarchy is used, the DSM-III-R and DSM-IV abuse category has lower and more variable reliability and validity than dependence (Hasin et al., 2006). However, when the hierarchical restrictions on the abuse diagnosis are lifted, the abuse criteria themselves are much improved (Hasin et al., 2006), indicating that the source of the problem was not the abuse criteria themselves but rather the hierarchical relationship between abuse and dependence. This problem could have been corrected by simply removing the hierarchy. However, other evidence suggested that such a solution was not the best one.

As Dr. Edwards noted, findings published in 2006 from an American survey (Saha et al., 2006) indicated that no distinct dependence entity existed that was "discontinuous with nondependent drinking problems," (Edwards, 2012—this issue) as he put it. Put a bit more formally, a one-factor model that incorporated both dependence and abuse criteria (excepting legal problems) fit the data better than a two-factor model that differentiated between these two types of criteria. Dr. Edwards was concerned that this neglected the possibility of "destructive and disruptive drinking behavior" (Edwards, 2012—this issue) without clinical symptoms of dependence. Such destructive drinking could certainly occur (e.g., a one-time episode of heavy drinking leading to a car crash and emergency room visit). However, the relationship of abuse to dependence criteria among patients in emergency departments in four countries was found to be the same as seen in the American survey (Borges et al., 2010), suggesting continuity rather than discontinuity in the likelihood of substance-related problems as substance dependence

increased. Further, the American survey also found that substance-related problems were much more likely to occur in the presence of dependence criteria (Dawson et al., 2010), which can be seen as confirming the prediction made by Edwards (Edwards and Gross, 1976) so many years ago.

The relationship between abuse and dependence symptoms has been replicated in more than 30 studies published since 2006. These are too numerous and varied to list here but include, for example, general population studies conducted on alcohol (Proudfoot et al., 2006) and cannabis (Teesson et al., 2002) in Australia; on alcohol (Shmulewitz et al., 2010) and nicotine (Shmulewitz et al., 2011) in Israel; and on opiates among treated clients in Australia (Shand et al., 2011; and see comment by Hasin, 2011). All studies considered by the DSM-5 Substance Use Disorders Work Group will be presented in more detail in the review mentioned above that is now in preparation.

Dr. Edwards and others (Caetano and Babor, 2006) voice concern that in household surveys, some DSM-IV dependence criteria occurring at a mild level are evaluated as positive because of measurement problems, leading to mistaken over-diagnosis of early adult cases that remit without treatment. According to this concern, these criteria would be rated as negative with better measures and would not be rated as positive by clinicians. Dr. Edwards suggests that proposed changes for DSM-5 are problematic because they are based on these mistaken measures. I suggest several responses to this concern. First, the amount of information collected with given measures can always be increased by adding questions. However, real-world issues often impinge on the ability to administer very lengthy measures. Second, the severity of some of the diagnostic criteria when seen in patients in tertiary treatment settings is almost certainly greater than the severity of the same criteria when seen in surveys. However, this does not detract from the fact that we still lack the ability to differentiate between young individuals in the general population who evidence the criteria and remit and those who go on to develop chronic, debilitating alcohol or other drug disorders (Hasin, 2005). Third, the concern that abuse and dependence criteria would be related to each other differently among patients evaluated by clinicians is addressed by a study using semistructured clinician evaluations of alcohol, cannabis, cocaine, and heroin disorders among 663 U.S. urban patients treated for comorbid substance and psychiatric disorders (Hasin et al., 2012). The results in this study on the relationship between abuse and dependence criteria were the same as those found in other settings.

Dr. Edwards was also concerned about a statement in the original editorial piece on the DSM-5 changes, published by Dr. O'Brien (2011), that abuse and dependence would be combined "because of the lack of data to support an intermediate state between drug use and drug dependence" (p. 867). Dr. O'Brien's editorial mainly focused on the name of the disorder (addiction vs. dependence), and his statement about the lack of an intermediate state should not be overinterpreted. In fact, all of the investigations of the DSM-5 workgroup to date have pointed toward a conclusion that the complex substance use disorders we are trying to define do not evidence a clear-cut boundary between the presence or absence of a disorder but instead show gradations of severity among users of the substance, ranging from none of the criteria to all of them.

I will end by stating that among the members of the DSM-5 workgroup, I was one of the last holdouts against combining the abuse and dependence criteria because, to me, the dependence process and its consequences do seem conceptually distinct. However, as I looked around the table at my colleagues in our in-person meeting on this issue and considered the overwhelming abundance of evidence in favor of combining the abuse and dependence criteria, I found I no longer had grounds to hold to my position. At some point in the future, the field may discover indicators of the dependence syndrome process at a more endophenotypic level than those currently available. Such indicators may be more specific to the process originally described by Dr. Edwards than the measures we have available today. If and when such indicators become available, they will surely prove useful for treatment development, and possibly for prevention. However, these indicators still await discovery. Meanwhile, within the timeframe and resources of the DSM-5 process, the substance use disorders workgroup has collected and contributed to a large literature on a system that is simpler (one disorder instead of two) and apparently more informative than the DSM-IV dependence criteria alone. Future studies will be needed to evaluate the implications of these changes more fully and to determine further refinements.

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