



DSM 5: Precedents, present and prospects

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ABSTRACT. The forthcoming DSM edition (DSM 5) will be published in May, 2013. Drafts that have been made available up to the present have launched several controversies. One of them is a possible diagnosis inflation that would generate an epidemic of false positive cases. The case of the proposed «Attenuated Psychotic Syndrome» is an important example, but others like the «Mild Neurocognitive Disorder» or the «Binge Eating Disorder» add to the list of controversial new proposals. Moreover, some methodological aspects of the whole procedure, including the imposition of a nondisclosure agreement, the lack of transparency and possible conflicts of interests have also been condemned. Historical developments of the DSM's evolution are reviewed: DSM-III and its «diagnostic reliability revolution», DSM-IV's validity problems and the doubts raised by DSM-V's expected «dimensional paradigm» shift. Finally, the prospect of neuroscience research as a possible way to overcome the present nosological problems is analyzed.

KEYWORDS. DSM 5. DSM III. DSM IV. Dimensional paradigm. Neurosciences. Theoretical study.

RESUMEN. La próxima edición del DSM (DSM 5) aparecerá en Mayo de 2013. Los borradores publicados ya han generado diversas polémicas. Se ha criticado la posible inflación diagnóstica con una previsible epidemia de falsos positivos en nuevos diagnósticos como el «síndrome psicótico atenuado». La propuesta de otros nuevos diagnósticos como el «trastorno cognitivo leve», el «trastorno por atracones» o las «adiciones conductuales», entre otros, se suman a esta polémica. También se han criticado ciertos aspectos metodológicos del proceso, como la exigencia de confidencialidad y la falta de

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transparencia y los conflictos de intereses. El artículo repasa los antecedentes históricos del proceso DSM, con la revolución en la fiabilidad diagnóstica del DSM-III, los problemas de validez del DSM IV y las dudas que genera el DSM 5 en el supuesto cambio de «paradigma dimensional». Asimismo, se apunta a posibles vías futuras de solución, más allá del DSM 5, en el avance de las ciencias básicas del cerebro y de la conducta.

PALABRAS CLAVE. DSM 5. DSM III. DSM IV. Paradigma dimensional. Neurociencias. Estudio teórico.

DSM-III: Grandpa was great

Let's go back some 40 years, to the early 70's. The USA-UK Cross National Project demonstrated in 1972 (Cooper, Kendell, and Gurland, 1972) the extreme weakness and low reliability of psychiatric diagnoses, especially in the field of psychosis. The times were ready for a methodological revolution in psychopathology and psychiatry and soon major advances in psychiatric diagnoses appeared. The pioneering work of the Saint Louis group, conducted by Robins and Guze, was important because its classification (Feighner *et al.*, 1972) was adopted by the Research Diagnostic Criteria, which was then adopted by DSM-III. Hence this paper was a precursor to modern psychiatric classification.

DSM-III (American Psychiatric Association, 1980) was a major scientific achievement. By creating a system of explicit, operationalized diagnostic criteria, DSM-III faced up to the pressing problem of interrater reliability in psychiatric diagnosis. It became necessary in the 1970s to facilitate diagnostic agreement among clinicians, scientists, and regulatory authorities given the need to match patients with newly emerging pharmacologic treatments and the associated need to conduct replicable clinical trials so that additional treatments could be approved. Researchers around the world could since speak a common diagnostic language. While it is true that no system based entirely on clinical description can match the levels of diagnostic agreement made possible by objective medical tests, there were no good alternatives for psychiatry when DSM-III was published in 1980. Indeed, even today objective tests and biomarkers for mental disorders remain research goals rather than clinical tools (Bernstein, 2011).

Should DSM 5 represent a step forward regarding reliability power? Or rather should our expectations of DSM 5 diagnoses be viewed in the context of what is known about the reliability and validity of diagnoses throughout medicine and not be set unrealistically high, exceeding the standards that pertain to the rest of medicine? Kraemer, Kupfer, Clarke, Narrow, and Regier (2012, p. 13) shed some light on this issue: «While one occasionally sees (in medical reliability studies) interrater kappa values between .60 and .80, the more common range is between .40 and .60. From these results, to see a kappa value for a DSM 5 diagnosis above .80 would be almost miraculous; to see k between .60 and .80 would be cause for celebration. A realistic goal is k between .40 and .60, while k between .20 and .40 would be acceptable. We expect that the reliability (intra-class correlation coefficient) of DSM 5 dimensional measures will be larger, and we will aim for between .60 and .80 and accept between .40 and .60».

DSM-IV: Problems with dad

The big success of the DSM system has, paradoxically, given rise to a serious side effect: reification. APA Past-President Carol A. Bernstein has written: «DSM diagnoses have come, over the last four decades, to be treated as «real entities» in the world, that is, they have been reified. Just as clinicians need DSM-IV diagnoses to select treatments, to communicate with each other and with patients, and to be reimbursed, scientists must generally use DSM-IV criteria to obtain a research grant or to have a paper accepted by a journal. Industry must use DSM-IV criteria in the design of clinical trials if they are to gain approval from the Food and Drug Administration for a new treatment. As a result, clinical and translational researchers have largely based their work on DSM-IV disorders...» (Bernstein, 2011, p. 7).

Other serious critiques to DSM-IV have pointed to: a) the exceedingly high rates of comorbidity, especially in some areas (*e.g.*, anxiety disorders, personality disorders); b) changes to the previous version seem to have contributed to three false positive «epidemics» - high rates of attention deficit hyperactivity disorder, autistic disorder, and childhood bipolar disorders. Clearly, there were other factors that also contributed, in particular drug companies marketing drugs for these diagnoses (Moynihan, Heath, Henry, and Gotzsche, 2002) directed not only to doctors but also the general public (Wykes and Callard, 2010); c) the widespread need for «not otherwise specified» (NOS) criteria. In some areas of practice, such as eating disorders, personality disorders, or autism spectrum disorders, NOS may be more prevalent than specific DSM-IV diagnoses. So, while initially a great aid to the study of mental illness by ensuring the comparability of research results, the DSM system has not yet solved the validity problem. Most DSM diagnoses are not etiologically based entities and are not grounded on critical therapeutic reasons. Moreover, they are neither particularly good entities (phenotypes) for research purposes. The case of schizophrenia is the unfortunate leader in this regard.

DSM 5: Bad omen before delivery...

The draft diagnostic criteria for DSM 5 has already been released. In the DSM 5 official site we can read the revisions that include the following.

- The recommendation of new categories for learning disorders and a single diagnostic category, «autism spectrum disorders» that will incorporate the current diagnoses of autistic disorders, Asperger's Syndrome, childhood disintegrative disorder and pervasive developmental disorder (not otherwise specified). Work group members have also recommended that the diagnostic term «mental retardation» be changed to «intellectual disability,» bringing the DSM criteria into alignment with terminology used by other disciplines.
- Eliminating the current categories substance abuse and dependence, replacing them with the new category «addiction and related disorders.» This will include substance use disorders, with each drug identified in its own category. Eliminating the category of dependence will better differentiate between the compulsive drug-seeking behavior of addiction and normal responses of tolerance and withdrawal that some patients experience when using prescribed medications that affect the central nervous system.

- Creating a new category of «behavioral addictions,» in which gambling will be the sole disorder. Internet addiction was considered for this category, but work group members decided there was insufficient research data to do so, so they recommended it be included in the manual's appendix instead, with a goal of encouraging additional study.
- New suicide scales for adults and adolescents to help clinicians identify those individuals most at risk, with a goal of enhancing interventions across a broad range of mental disorders; the scales include research-based criteria such as impulsive behavior and heavy drinking in teens.
- Consideration of a new «risk syndromes» category, with information to help clinicians identify earlier stages of some serious mental disorders, such as neurocognitive disorder (dementia) and psychosis.
- A proposed new diagnostic category, temper dysregulation with dysphoria (TDD), within the Mood Disorders section of the manual. The new criteria are based on a decade of research on severe mood dysregulation, and may help clinicians better differentiate children with these symptoms from those with bipolar disorder or oppositional defiant disorder.
- New recognition of binge eating disorder and improved criteria for anorexia nervosa and bulimia nervosa, as well as recommended changes in the definitions of some eating disorders now described as beginning in infancy and childhood to emphasize that they may also develop in older individuals (American Psychiatric Association, Announces Draft Diagnostic Criteria for DSM-5 2010a). The present proposed general revision is listed on Table 1.

TABLE 1. Proposed DSM 5 organizational structure.

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- Neurodevelopmental Disorders
 - Schizophrenia Spectrum and Other Psychotic Disorders
 - Bipolar and Related Disorders
 - Depressive Disorders
 - Anxiety Disorders
 - Obsessive-Compulsive and Related Disorders
 - Trauma- and Stressor-Related Disorders
 - Dissociative Disorders
 - Somatic Symptom Disorders
 - Feeding and Eating Disorders
 - Elimination Disorders
 - Sleep-Wake Disorders
 - Sexual Dysfunctions
 - Gender Dysphoria
 - Disruptive, Impulse Control, and Conduct Disorders
 - Substance Use and Addictive Disorders
 - Neurocognitive Disorders
 - Personality Disorders
 - Paraphilias
 - Other Disorders
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In addition to proposed changes to specific diagnostic criteria, the American Psychiatric Association (APA) is proposing that «dimensional assessments» be added to diagnostic evaluations of mental disorders. These would permit clinicians to evaluate the severity of symptoms, as well as take into account «crosscutting» symptoms (American Psychiatric Association, Announces Draft Diagnostic Criteria for DSM-5, 2010a).

The field of Personality Disorders is perhaps the best example of this aim. A hybrid dimensional-categorical model for personality and personality disorder assessment and diagnosis has been proposed for DSM 5 field testing. Six specific personality disorder types (antisocial, avoidant, borderline, narcissistic, obsessive-compulsive, and schizotypal) are defined by criteria based on typical impairments in personality functioning and pathological personality traits in one or more trait domains. The diagnosis of Personality Disorder Trait Specified (PDTS) is defined by significant impairment in personality functioning, as measured by the Levels of Personality Functioning scale, and one or more pathological personality trait domains or trait facets. PDTS replaces Personality Disorder Not Otherwise Specified in the proposed DSM 5 system.

The levels of personality functioning are based on the severity of disturbances in self and interpersonal functioning. Impairments in self-functioning are reflected in dimensions of identity and self-directedness. Interpersonal impairments consist of impairments in the capacities for empathy and intimacy. Five broad personality trait domains (negative affectivity, detachment, antagonism, disinhibition vs. compulsivity, and psychoticism) are defined, as well as component trait facets (for example, impulsivity and rigid perfectionism) (American Psychiatric Association, DSM-5 Development, 2011). A «Guide to Implementation» is provided to help the clinician in those kind of diagnoses (see Table 2).

TABLE 2. Personality Disorders. Guide to implementation.

A standard approach to the assessment of personality pathology using the DSM 5 model could be the following:

1. Is impairment in personality functioning (self and interpersonal) present or not?
 2. If so, rate the level of impairment in self (identity or self-direction) and interpersonal (empathy or intimacy) functioning on the Levels of Personality Functioning Scale.
 3. Is one of the 6 defined types present?
 4. If so, record the type and the severity of impairment.
 5. If not, is PD-Trait Specified present?
 6. If so, record PDTS, identify and list the trait domain(s) that are applicable, and record the severity of impairment.
 7. If a PD is present and a detailed personality profile is desired and would be helpful in the case conceptualization, evaluate the trait facets.
 8. If neither a specific PD type nor PDTS is present, evaluate the trait domains and/or the trait facets, if these are relevant and helpful in the case conceptualization.
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I would like just mention that this approach has been considered «impossibly complicated and cumbersome». «The DSM 5 dimensional proposals are especially

problematic, ad hoc, unworkably complex, vague, untested, and premature. If anything, the poorly executed introduction of unwieldy dimensions into DSM 5 is likely to give them a bad name and poison the well for their future necessary acceptance. It is also possible that the use of dimensions may create problematic unintended consequences in insurance, disability, and forensic determinations» (Frances, 2009b, p. 391).

It is far beyond the scope of the present paper to review in detail all of the proposals above mentioned. I will only focus and discuss one of the key pillars of psychiatric classification: schizophrenia spectrum psychosis.

Psychosis

Although there is a growing consensus in thinking that schizophrenia is an obsolete construct that needs to be superseded, the process of «deconstructing» psychosis (Van Os and Tamminga, 2007) has not yet yielded any tangible results. Dimensional approaches to schizophrenia and psychosis (Allardyce, Suppes, and Van Os, 2007) have not yet ripe enough to displace the old Kraepelinian concept. So DSM 5 will seemingly retain the main pillars that have stood up since the beginning of the XX century.

A controversial but well founded innovation in the field is related to the prodromal phases of psychosis. The evidence accumulated over the past 15 years that points to the existence of attenuated symptoms long before the appearance of a clear-cut psychotic episode has motivated the proposal for a Attenuated Psychosis Syndrome (APS) new category (see Table 3). The validity of criteria for identifying at-risk individuals has been published (Woods *et al.*, 2009). The potential benefit of establishing a category «involves the evidence that psychotic illness is most effectively treated early in the course raising the potential that early intervention may have long lasting benefit that is not achievable with later therapeutic intervention» (American Psychiatric Association, DSM-5 Development, 2010b).

TABLE 3. Attenuated Psychosis Syndrome. Criteria.

All six of the following:

- a) Characteristic symptoms: at least one of the following in attenuated form with intact reality testing, but of sufficient severity and/or frequency that it is not discounted or ignored.
 - a. Delusions
 - b. Hallucinations
 - c. Disorganized speech
 - b) Frequency/Currency: symptoms meeting criterion A must be present in the past month and occur at an average frequency of at least once per week in past month.
 - c) Progression: symptoms meeting criterion A must have begun in or significantly worsened in the past year.
 - d) Distress/Disability/Treatment Seeking: symptoms meeting criterion A are sufficiently distressing and disabling to the patient and/or parent/guardian to lead them to seek help.
 - e) Symptoms meeting criterion A are not better explained by any DSM-5 diagnosis, including substance-related disorder.
 - f) Clinical criteria for any DSM-V psychotic disorder have never been met.
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A substantial body of prospective research has established that individuals who develop attenuated psychotic symptoms accompanied by dysfunction at school and similar problems at home are much more likely than individuals in the general population to develop schizophrenia or other psychotic disorders within 2 years (at a rate of 10%-30% compared with 0.02%) (Cannon *et al.*, 2008). The research has been conducted at multiple sites in the United States and Europe, and the convergence on a set of criteria that can be diagnosed reliably by different observers and have the external validity of leading to a dire illness has been established (Carpenter and Van Os, 2011).

Experts emphasize that current distress is a necessary criterion for this diagnosis. These individuals already need help because of behavioral and cognitive problems at school and at home. They need psychological help and, in some cases, medication, which they cannot receive in most health care systems if they have not received a commensurate diagnosis. Without a diagnosis, the consequence is that they cannot get help in the stage of illness when it might be most helpful for the prevention of chronic illness (Carpenter and Van Os, 2011). In a Norwegian study, for example, early recognition of individuals with attenuated psychotic symptoms has resulted in an overall reduction in suicide rate because individuals have initiated treatment before they reach their sickest state (Melle *et al.*, 2006). The APS advocates claim that even if they do not convert to psychosis, the distress and dysfunction that these people experience are severe enough to merit help.

On the opposite side of this debate, some leading figures claim the contrary, fear a «public health catastrophe» and think that the whole idea is dangerously premature. For example, Allan Frances states that «the APS is probably one of the most worrisome of all the suggestions made for DSM 5. The false positive rate would be alarming-70% to 75% in the most careful studies and likely to be much higher once the diagnosis is official, in general use, and becomes a target for drug companies. Hundreds of thousands of teenagers and young adults (especially, it turns out, those on Medicaid) would receive the unnecessary prescription of atypical antipsychotic drugs. There is no proof that the atypical antipsychotics prevent psychotic episodes, but they do most certainly cause large and rapid weight gains (see the recent FDA warning) and are associated with reduced life expectancy-to say nothing about their high cost, other side effects, and stigma» (Frances, 2010).

And more...

It is not reassuring news that the two former heads of the DSM-III and DSM-IV task forces, Robert Spitzer and Allen Frances, have seriously condemned some of the DSM 5 proposals and methods. First, they have publicly criticized the APA for mandating that DSM 5 task force members sign a nondisclosure agreement, effectively conducting the whole process in secret. Although the APA has since instituted a disclosure policy for DSM 5 task force members, many still believe the Association has not gone far enough in its efforts to be transparent and to protect against industry influence. It has been noted that «the fact that 70% of the task force members have reported direct industry ties -an increase of almost 14% over the percentage of DSM-IV task force

members who had industry ties- shows that disclosure policies alone, especially those that rely on an honor system, are not enough and that more specific safeguards are needed» (Cosgrove, Bursztajn, Kupfer and Regier, 2009, p. 1).

A general concern points to the potential increase of mental disorder rates. As Allen Frances puts it: «These might come in two forms: a) new diagnoses that would be extremely common in the general population (especially after marketing by an ever alert pharmaceutical industry), and b) lowered diagnostic thresholds for many of the existing disorders, from the elimination of the «clinical significance» DSM-IV criterium DSM 5 would create tens of millions of newly misidentified false positive «patients», thus greatly exacerbating the problems caused already by an overly inclusive DSM-IV. There would be massive overtreatment with medications that are unnecessary, expensive, and often quite harmful. DSM 5 appears to be promoting what we have most feared—the inclusion of many normal variants under the rubric of mental illness, with the result that the core concept of «mental disorder» is greatly undermined» (Frances, 2010, p. 1).

New diagnoses are being proposed that seem problematic: First of all, the Attenuated Psychosis Syndrome, already discussed. But also the Mixed Anxiety Depressive Disorder, the Minor Neurocognitive Disorder, the Binge Eating Disorder, the Temper Dysfunctional Disorder with Dysphoria, the Hypersexuality Disorder, the Behavioral Addictions category and the Paraphilic Coercive Disorder, all of which share the presence of nonspecific symptoms and blurred distinctions with normal range behaviors and hence would most probably increase the large mass of false positive cases. Moreover, this would provide too good ammunition for a new antipsychiatry wave or, at least, for a reasonable argument against medicalisation of different kinds of free-willy elected, or cultural variants of normal behavior.

So long as psychiatric diagnosis is stuck in its current descriptive level, there is little to be gained and much to be lost in frequently and arbitrarily changing the system. Descriptive diagnosis should remain fairly stable until, disorder by disorder, we gradually attain a more fundamental and explanatory understanding of causality (Frances, 2009a).

Beyond DSM 5: What to expect for the next DSM generation?

DSM diagnostic entities, based solely on clinical phenomena, continue to dominate research in all its domains, despite a large and growing body of data, derived both from clinical sources and from the laboratory, signaling profound problems in the way that DSM-IV divides and classifies the complex world of psychopathology. The recent advances in neuroscience, molecular biology, and brain imaging are not yet relevant to the clinical purposes of everyday psychiatric diagnosis. «The clearest evidence supporting this disappointing fact is that not even 1 biological test is ready for inclusion in the criteria sets for DSM-5» (Frances, 2009a, p. 2).

The boundaries of these categories have not been predictive of treatment response. And, perhaps most important, these categories, based upon presenting signs and symptoms, may not capture fundamental underlying mechanisms of dysfunction. At present, DSM-IV categories do not map well onto the genome, just as they fail to map onto clinical populations (Bernstein, 2011). Psychiatry is still far away from the rest of

medical specialties, where the use of biological parameters for diagnostic purposes is widespread.

¿Is this caused by a radically different nature of the object under study? Are psychopathological entities not amenable to scientific investigation? I am sure they are. It is just a matter of complexity and difficulty, hence of time. The question is: are we ready for a radical change in our classification system? Or, as Frances signaled: «The DSM 5 goal to effect a «paradigm shift» in psychiatric diagnosis is absurdly premature.... There can be no dramatic improvements in psychiatric diagnosis until we make a fundamental leap in our understanding of what causes mental disorders» (Frances, 2009b, p. 392).

Should agencies be more flexible in the upcoming future to fund clinical research that is not strictly based on DSM 5 criteria? Will scientific journal editors be willing to accept papers on the biology of psychotic dimensions or symptoms rather than «schizophrenia»? Hopefully, they will. Meanwhile, the NIMH is launching the Research Domain Criteria (RDoC) project to create a framework for research on pathophysiology, especially for genomics and neuroscience, which ultimately will inform future classification schemes of mental disorders. The RDoC project is intended to be the next step in a long journey, one that continues the process begun in the 1970s of ensuring diagnosis that has both reliability and validity (Insel *et al.*, 2010). It is expected that the RDoC can contribute to a nosology in which disorders are grouped by underlying pathophysiological similarities rather than phenomenological observations. Interestingly, the polemical proposal discussed above for the «attenuated psychosis syndrome» diagnosis was developed largely «because of the sizable body of literature on psychosis risk and vulnerability factors detailing structural and functional imaging, neurocognition, and genetic outcomes» (Kupfer and Regier, 2011). If this is true, it would mean that DSM 5.1 will require not only lots of new neuroscientific evidence but also a great deal of mind shifting and prejudice overcoming.

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