Why the clinical utility of diagnostic categories in psychiatry is intrinsically limited and how we can use new approaches to complement them

It is becoming increasingly evident that the usefulness of diagnostic categories in psychiatry has been overemphasized. These categories have been initially charged with implications in terms of pointing to a specific treatment and prospectively a specific etiology and/or pathogenesis, in complete analogy with the other branches of medicine. More recently, they have been more modestly charged with relative, not absolute, pragmatic implications in terms of guiding the formulation of a management plan and the prediction of outcomes (the two main elements of "clinical utility")[1]. The underlying concept has been that we are dealing with "patterns" of intercorrelated reported experiences (in medical jargon, symptoms) and observed behaviours (in medical jargon, signs) which allow significant inferences about further course and management, whereas there is no assumption that these patterns are all "natural kinds" (i.e., discrete disease entities marking a real division in nature)[2]. Indeed, improving the clinical utility of psychiatric diagnoses has been the declared main objective of both the DSM-5 and, even more explicitly, the ICD-11[3].

Unfortunately, even these more modest implications of diagnostic categories in psychiatry have turned out to be overestimated. This is not to say that our current diagnoses do not have clear implications in terms of treatment choice and prediction of outcomes. The fact is, however, that these implications are less significant than originally believed and still assumed by most treatment guidelines. A clear reflection of this state of affairs can be found in the survey by First et al[4] that appears in this issue of the journal, in which a large sample of users of either the ICD-10 or some edition of the DSM rated those diagnostic systems as having the *lowest* utility in "selecting a treatment" and "assessing probable prognosis", whereas they were perceived to be much more useful for meeting administrative requirements, communicating with other health professionals, and teaching trainees or students. Indeed, both research evidence and clinical experience tell us that patients sharing the same psychiatric diagnosis often respond differently to a given treatment, and patients with different psychiatric diagnoses may respond similarly to a given treatment (not to mention the wide variability of outcomes in people receiving the same diagnosis).

Alternative approaches to the ICD/DSM are currently being developed. They usually assume either: a) that the realm of psychopathology can be more efficiently described in terms of dimensions, or b) that the neurobiological underpinnings of psychopathology should be the major drivers of psychiatric classifications. These alternative approaches are being put forward both at the level of the entire realm of psychopathology (respectively, by projects such as the Hierarchical Taxonomy of Psychopathology, HiTOP[5] and the Research Domain Criteria, RDoC[6]) and at the level of specific areas of psychopathology (respectively, through models such as the "transdiagnostic psychosis spectrum"[7] and the "neurodevelopmental gradient"[8]).

These approaches, in order to really emerge in the future as a practical alternative to ICD/DSM-based diagnosis, will have to prove: a) to be reasonably applicable in ordinary clinical practice (also in various clinical settings and in the hands of different categories of professionals), and b) to be actually more clinically useful than current diagnostic practices, i.e., more efficient in guiding the choice of treatment and the prediction of outcomes. This evidence is *not* available at the moment.

But, are these approaches really "alternative" to the DSM/ICD systems, as they are usually proposed to be? I think it needs to be clarified that, in psychiatric practice, "diagnosis" (i.e., the application to an individual case of a given category or "type" from a classification) is (or should be) only one step in the process that leads to the formulation of the management plan and of prognosis. The other step is (or should be) the further characterization of the individual case with respect to a series of additional variables. This second step is at least as important as "diagnosis" in the management choices and the prediction of outcomes. Since the vast majority of our current diagnostic categories are unlikely to represent "natural kinds" (and the minority which may approximate that model are likely to be heterogeneous from the etiopathogenetic viewpoint), the information conveyed by "diagnosis" (i.e., the "type" to which the patient can to a variable extent be reconducted) is in itself insufficient for therapeutic and prognostic purposes. Hence the need for a more detailed psychopathological characterization of the individual case, as well as for an exploration of what is behind the "pattern" we have applied, in that specific case, with respect to vulnerability and protective factors.

The fact is, however, that up to now the first step (diagnosis) has received a lot of attention, with the production of several generations of tools providing systematic guidance to the clinician, whereas the second step (further characterization of the individual case) has been largely ignored, thus generating an inter-clinician variability in its implementation which is not less significant and deleterious than that described for the first step in the 1970s. The focus on diagnostic categories in most research and in virtually all clinical guidelines, as well as the emphasis on pharmacological interventions, for which a simplistic and stereotyped relationship between "diagnosis" and "treatment" can be more easily proposed, has certainly contributed to this situation.

Well, one could argue that the above "alternative" approaches may not have a significant chance in the future to "replace" our current diagnostic practices (i.e., to take their place in the first step of the above-mentioned process), while

they are much more likely to improve significantly the second step (the further characterization of the individual case), thus complementing current diagnoses.

What are, or may be, in fact the main elements of that second step? They include the characterization of the individual case with respect to the relevant psychopathological dimensions and possibly to the current stage of development of the diagnosed disorder (see McGorry et al[9] in this issue of the journal); an assessment of the severity of the clinical picture which is less generic and more evidence-based than that currently provided by the ICD and the DSM; the exploration of antecedent variables such as family history of mental illness, other parental factors, perinatal factors, early environmental exposures, psychomotor development, premorbid social adjustment, psychopathological antecedents, and possibly in the future polygenic risk scores; and the assessment of concomitant variables such as personality traits, cognitive functioning, social functioning (including personal resources such as resilience and coping strategies), soft neurological signs, substance abuse, recent environmental exposures, and possibly in the future some biological markers. It is with respect to the assessment of these latter elements that clinicians need today a systematic guidance, which current diagnostic systems and related tools do not provide, or do not provide satisfactorily (thus contributing to a therapeutic practice which, being guided just by a diagnostic label, is oversimplified and stereotyped).

I would therefore envisage that the approaches which are currently regarded as alternative to the ICD and DSM may not turn out to be, in the future, a basis for a clinically useful reclassification of psychopathology, but that elements of those approaches may be increasingly incorporated in the further characterization of the individual case, which is at least as important as the application of a diagnostic label in the management choices and the formulation of prognosis.

The message may be, therefore, that we do need current diagnostic categories (which can certainly be much improved, but without which we would either be lost in a *mare magnum* of variables, or presented with synthetic formulations which are less efficient, in addition to being potentially controversial and not rooted in clinical tradition), but that those categories are intrinsically insufficient in pursuing the "clinical utility" objectives of the DSM-5 and the ICD-11, because the act of diagnosis is only one step in the process leading to the key aims of the optimal formulation of the management plan (especially if this does not include just the selection of a medication) and the prediction of outcomes (especially if this is meant to cover not only clinical variables, but also elements concerning social functioning and personal recovery).

We should start to promote the construction and validation – in addition to structured interviews leading to a given diagnosis – of tools guiding the clinician systematically in the characterization of the individual case, with a special focus on the assessment of psychopathological dimensions, the reliable evaluation of the severity of the clinical picture, and the exploration of a series of antecedent and concomitant variables. We should try to incorporate in this effort – already now and increasingly in the future – elements of the approaches that are currently presented as alternative to the ICD/DSM. The entire mental health field should ideally contribute to this endeavour, declaring a moratorium on self-defeatism and parochial struggles.

Mario Maj
Department of Psychiatry, University of Campania "L. Vanvitelli", Naples, Italy

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