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Classification in Psychiatry: Does it deliver in schizophrenia and depression?

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Abstract

Background: In the context of ongoing work to develop the next iteration of psychiatric classification systems, we briefly review the performance of current systems against their own stated objectives, for two major diagnostic groupings.

Discussion: In the major groupings of schizophrenia and depression, experience over the last 50 years has highlighted particular inadequacies in the utility and validity of available classifications.

Summary: Advances in psychiatric knowledge and practice notwithstanding, present classification systems would be enhanced by the incorporation of dimensional components. Minor tinkering with current systems will reflect only a missed opportunity. Improving classification will facilitate quality improvement of mental health systems.

Background

As a specialised domain within health sciences, psychiatric diagnostic practice has evolved under the influence of the biomedical model, stimulated in part by the success of rigorous and useful models of scientific classification, such as the periodic table and Linnaean biological taxonomy[1].

Systematic classifications in psychiatry were first recognisably developed by Pinel, but it is usually accepted that we owe most to the work of Kraepelin and Bleuler[1]. The labels available for mental disorders have evolved from those baselines, with periodic, formal re-evaluation under the guidance of the World Health Organisation, as new editions of the International Classification of Diseases (ICD) have been developed [2]. Also widely used is the 4th Edition of the Diagnostic and Statistical Manual (DSM-IV) of the American Psychiatric Association[3].

In general, psychiatric literature, service organisation and funding, clinicians and researchers have worked within this framework. Nonetheless, there has always been a trickle of thoughtful dissenters and research based questions raised, sometimes about the fundamental approach, but more often about the detail [4-9].

Chapter V of ICD-10, the Classification of Mental or Behavioural Disorders[2] "...is intended for general clinical, educational and service use." The Text Revision of DSM-IV[3] is more specific "our highest priority has been to provide a helpful guide to clinical practice," amplifying this to include: -

• A means by which the profession *communicates* briefly and clearly within itself about clinically recognisable conditions for which it has professional responsibility for diagnosis, care, or research.

• When possible, a useful *guide to current treatments*.

• Information about the *likely outcome* of psychiatric disorders with and without treatment.

• What is known of aetiology or *pathophysiological* processes.

The specificity apparent in the DSM guiding principles accords with the oft quoted views of Robins and Guze[10] on comprehensive criteria for evaluating the validity of a psychiatric disorder. Such demanding criteria are far from being realized for many psychiatric disorders [11]. Recent work in Australasia, South America and East Asia suggests that practising psychiatrists have more limited views, or expectations, on the purpose of psychiatric classification [12]. It remains an open question whether the Robins and Guze criteria need to be applied and implemented more effectively, or rethought altogether.

From the above, we conclude that psychiatric classificatory systems are intended to facilitate communication of information regarding:

• Description of disorders in order to promote understanding by colleagues, patients, and others

• Pathogenesis

• Indicated treatment choices

• Prognosis

• Categories useful for epidemiology, outcomes and other research

Below, we consider schizophrenia and depression, the two groups of diagnoses most commonly used in psychiatry. For each diagnostic group we note key published perspectives on the performance of current classification against the above objectives.

Schizophrenia

Current classificatory descriptions of schizophrenia are detailed, precise and specific, and as such allow reliable communication regarding how the disorder 'feels' to those affected, and 'looks' to clinicians and family. Classifications achieved an acceptable degree of inter-rater reliability in field trials[2,3] but perform far less reliably in standard clinical practice[11]. The 37 four-digit codes available under the ICD-10 general category of schizophrenia provide a degree of detail likely to be irrelevant in many countries [13].

There is little in either ICD or DSM regarding aetiology, an important shortcoming in light of evidence that both genetics and environment, separately and in combination, confer risk for this disorder in various populations [14,15]. There is also evidence of physiological, anatomical and immunological abnormalities in schizophrenia that strongly suggest one or more brain pathologies [16,17]. It follows that improved diagnostic validity will, *inter alia*, magnify the signal-to-noise ratio for detecting causal mechanisms operating in schizophrenia, particularly if there exist distinct biological or other pathogenic subgroups. Equally, better mechanistic understanding of schizophrenia will help to validate diagnostic subtypes, and their treatment implications.

A key problem, evident since the time of Bleuler, has been that the prognosis in 'schizophrenia' has appeared variable, from complete recovery to progressive dysfunction and invalidism[18]. This problem prompted the delineation of 'schizophreniform disorder' in DSM, phenomenologically identical to acute schizophrenia but with a brief time course, more frequent remission, and better prognosis. Similarly, the work of Robins and Guze[10] indicates that what has been called 'mild' or good prognosis schizophrenia is fundamentally different from typical or 'process' schizophrenia and it may thus be a misnomer to refer to the former as schizophrenia at all. Such clinical reasoning, bolstered by carefully collected outcome data and accumulating evidence of pathogenic mechanisms, indicates that a categorical definition of schizophrenia is likely to remain valid, provided that similar disorders can be reliably distinguished. A supplementary dimensional description of phase and severity holds promise as a guide to management and prognosis[19].

Treatment guidelines for schizophrenia include a variety of psychosocial interventions, but centre around antipsychotic drugs[18,20]. Other available psychotropics, including mood stabilisers, antidepressants and hypnosedatives, also have an apparent role, raising serious questions about any specificity between diagnosis and indicated medication. Moreover, clinical response to individual or grouped agents is unpredictable, and treatment decisions are influenced by many patient variables other than diagnosis [18,20]. For example, treatment needs in chronic psychosis are more powerfully predicted by symptom intensity than by diagnosis *per se* [9].

Depression

Widespread debate about the validity of contemporary classification of depression stems from the fact that the therapeutic and prognostic implications of mood disorder diagnosis have repeatedly proved to be unreliable. Thus Parker [21] has argued convincingly that the concept of major depression suffers from problems of both reliability

and validity, and crucially "fails the test of providing meaningful information about aetiology, prognosis and treatment". One perennial difficulty is establishing a valid diagnostic threshold of symptom severity or functional impairment – particularly problematic since everyone experiences fluctuating depressive symptoms to some extent. It is not surprising therefore that the use of the diagnostic label 'depressive disorder' has created a spurious impression of understanding [22,23]. It does not tell us why and how a person became depressed nor does it indicate degree of disability, duration, or the risk to self or others. Similarly, it does not inform us about what specific treatment (e.g. ECT, antidepressant medication or psychotherapy) would be appropriate or helpful. Furthermore, there is a disparity between the descriptive diagnostic labels, the real life situation, and day-to-day clinical practice. This apparent lack of correspondence between diagnosis and disorder is partly related to the failure of contemporary classification systems to recognise and address the inherent boundary ambiguities in depressive disorder[23]. The usefulness of diagnostic categories for epidemiology, outcomes and other research in mood disorders is likely to continue, but serious concerns regarding validity call for consideration of dimensional diagnostic alternatives [24].

Conclusion
This report highlights the degree to which the performance of ICD-10 and DSM-IV fall short of their own objectives. It is time to acknowledge that the 'classification emperor' is less well-clothed than our daily practice requires [25]. Existing categories also constrain thinking about how to measure and address unmet need in populations. New, more valid, means of classification need to be developed, perhaps incorporating concepts derived from non-categorical thinking. Dimensional classification may, for example, usefully inform the description of unipolar depression, anxiety and personality disorders [24,26]. A "quantitative" axis incorporating such dimensions and other guides to treatment and progress, such as disorder staging and substance use, is a classificatory evolution whose time has come. For these disorders at least, dimensional description offers potential advances in the prediction of both treatment choice and longitudinal course, while retaining improvements in inter-clinician communication developed over the last 25 years. With regard to the major psychoses, available evidence is more supportive of the validity of categorical diagnoses but suggests these need to be supplemented with dimensional or illness-phase classification. Simplification of current, overly complex subcategories is clearly warranted; dimensional measures retain complementary importance as predictors of impairment and prognosis.

Summary
Official systems of psychiatric classification have been evolving for more than 100 years and underpin the organisation of services, individual clinicians' work, and most psychiatric research. Sporadic reviews have challenged the validity and usefulness of some of the key categories in ICD and DSM. This article reflects on classification system performances against their own claimed objectives, in two diagnostic areas. We conclude that evident inadequacies can no longer be ignored and that dimensional approaches to classification offer one way forward.

List of abbreviations used
DSM: Diagnostic and Statistical Manual of Mental Disorders;

ICD: International Classification of Diseases.

Competing interests
The author(s) declare that they have no competing interests.

Authors' contributions
All three authors contributed significantly to the background literature review, to the development of the argument, and to drafting the text.

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