

THE MENTAL ILLNESS SPECTRUM

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SUMMARY

There exists a growing argument in favour of a more dimensional approach to the diagnosis and treatment of psychiatric patients. This encompasses first the idea of a spectrum of symptoms correlating to severity within a single disorder, and secondly, the idea of spectra of different disorders sharing overlapping collections of symptoms. Here we consider the issue in light of specific clinical examples we have observed, which support the idea of a 'mental illness spectrum', both with symptoms within a single disorder, and between different mental disorders.

Key words: *spectrum - bipolar disorder - borderline personality disorder – schizophrenia - subthreshold symptoms*

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INTRODUCTION

The argument for a more dimensional approach to mental illness is not new. The suggestion that a solely categorical method of diagnosing mental disorders is insufficient can be found in psychiatric literature from decades past (Kendell 1975). The classification of mental disorders into discrete groups, instigated by Emil Kraepelin's work in the previous century, is convenient, but has been challenged on several grounds by many authors through the years (Kendell 1975, Kessler 2002, Helzer et al. 2006, Jablensky 2012, Regier 2012).

Kraepelin himself later advocated the move from grouped classifications to the development of a more natural system based on the 'essential structure' of the illness in his last two papers (Kessler et. al. 2010). His 'pipe organ' analogy of chords constructed from a multitude of 'pipes' that can be blended together to create different mixtures of sound illustrates well the concept of disorders with multifactorial origins: clinical features based on genetic, metabolic, environmental and experiential influences. This concept of distinct but heterogeneous mental disorders is supported by Kendell (1975), who notes that our view of what comprises a disease or disorder does not preclude a polythetic concept of mental disorders comprising a 'set of traits, no one of which is mandatory.'

Such a syndromal view of mental disorders is not well described by a purely categorical classification. Amongst the problems cited in the literature, categorical systems encourage clinicians to seek a primary diagnosis for the patient, with diagnostic criteria under which the patient's symptoms should mainly fall. This is not conducive to a syndromal approach in which a patient may exhibit multiple co-morbidities, meeting the criteria for several diagnoses. Indeed, data from clinical

and population studies has been interpreted by some to suggest that overlap between mental disorders is the rule, not the exception (Helzer et al. 2006). Conversely, the patient that presents with symptoms that have a significant impact on functioning but remain subthreshold for any single disorder is also disadvantaged in the all-or-none categorical system currently employed by DSM-IV and ICD-10 (Jablensky 2012).

PATIENT CASES

It is such patients that the authors have encountered in daily practice, prompting the addition of this article to the growing literature on dimensional versus categorical classification systems. We enter the debate from a slightly different perspective, using choice cases to illustrate the need for a changed approach and to touch upon potential solutions from a practical, clinical standpoint.

Patients with subthreshold symptoms enter psychiatric care from many sources, often repeatedly. The psychiatry junior knows all too well the sinking feeling experienced while leafing through the notes of the patient with 'query personality traits' that they have been tasked to clerk in at the end of their shift: too often one finds pages and pages documenting multiple admissions with no clear diagnosis (or worse, multiple diagnoses that have been ignored by the next doctor) but a clearly recurrent problem. Such patients experience significant difficulties in functioning on different levels.

We have seen patients admitted after overdosing for the third time in as many years, with symptoms that could be interpreted as subthreshold for bipolar affective disorder or cyclothymia, as part of the prodrome for early psychosis, or as subthreshold for

borderline personality disorder. Without fulfilling the diagnostic criteria for any disorder, their history of care under the psychiatric services was confused and patchy, including several admissions, brief episodes of counselling and courses of antidepressants prescribed by their GP (promptly used to overdose on, although no suicidal intent or ideation had been detected at the time of prescription). Additionally, the impulsive and affective components of the patients presentation had not aided their continuity of care under the service, including several instances of self-discharge after previous admissions to hospital.

Other patients present with similar stories: clinical pictures equally suggestive of early psychosis or subthreshold bipolar affective disorder; personality disorder or subthreshold bipolar affective disorder; or unipolar depression with episodes of hypomania of insufficient duration to warrant a bipolar diagnosis. Their diagnosis and management is not always, in our experience, completely satisfactory.

SUBTHRESHOLD SYMPTOMS

In such cases of patients with subthreshold symptoms, it is useful to consider that the ICD-10 classification system and associated NICE guidelines are convenient tools at the psychiatrist's disposal, but should be used in the context of clinical judgement and experience. One school of thought proposes that there should be no absolute cut-off to treatment of mental illness, rather an emphasis on the impact the problems are having on patient functioning.

Moreover, subthreshold symptoms have been shown to progress to levels of diagnostic significance in several disorders and early treatment in some cases could improve patient outcomes. Research from Ayuso-Mateos et al. (2010) suggests that subthreshold depressive symptoms lead to significant decrements in health and are not qualitatively different from 'full-blown' episodes, supporting the validity of a spectrum of depressive illness (Angst et al. 2000, Judd 2000, Andrews et al. 2007). Subthreshold schizophrenia-like symptoms may suggest a genetic predisposition to schizophrenia (Flehtner et al. 2000), and better outcomes have been demonstrated for patients treated with antipsychotics in the prodromal phase in comparison to those with a long duration of untreated psychosis (Novak Sarotar et al. 2008).

In a similar way, patients with bipolar affective disorder are thought by some to experience a duration of untreated illness (Morselli et al. 2002, Agius et al. 2007). However the evidence for this is not as extensive as that for the duration of untreated psychosis, and this highlights one of the potential risks of using a dimensional approach to mental disorders: the risk of over-diagnosis and over-medication of patients for whom a label and pharmacology may not be beneficial (Rubin 2011). This is not an insurmountable obstacle: the weighting of symptoms to produce indices similar to

the Hamilton scale for depression (Hamilton 1960) could help to dictate the severity and management of a disorder in conjunction with clinical expertise and discretion. Nevertheless, it is an important pitfall to avoid in a new order of mental illness classification.

OVERLAPPING SYNDROMES

The second issue these patient cases illustrate is the problem of patients with features that overlap multiple disorders, with no clear primary diagnosis. Evidence of links between disorders that are classed as seemingly distinct by a categorical system is manifold and supports a more dimensional or syndromal approach.

First let us consider unipolar depression and bipolar affective disorder. In recent times these conditions have been speculatively placed on a spectrum of dysthymia–unipolar depression–recurrent depressive disorder–atypical depression–bipolar spectrum disorder–cyclothymia–bipolar II–bipolar I. Bipolar spectrum disorder particularly highlights the affective spectrum between bipolar and unipolar depression, with its diagnostic criteria including at least one major depressive episode, no spontaneous mania or hypomania, and a history of early onset depression, psychosis, atypical depression, postpartum depression, antidepressant-induced depression or a family history of bipolar disorder, amongst other options (Ghaemi et al. 2002).

Evidence of shared genetics is seen in schizophrenia and bipolar affective disorder too. COMT, DISC1, G72 and BDNF genes have all been implicated in predisposing to both disorders (Kradock & Owen, 2005, 2010). The theory that each syndrome has susceptibility genes activated in different combinations at different times, yielding variable and changing clinical pictures is illustrated by the syndromal spectrum in early psychosis, which describes a multitude of symptoms (including positive symptoms, negative symptoms, mania and major depression) that may be present in different combinations, much like Kraepelin's organ pipes.

A familial relationship has also been found between borderline personality disorder and affective disorders, including bipolar affective disorder. Borderline personality traits of impulsivity increase the risk of suicide in patients with bipolar disorder (Rihmer & Benazzi 2010), while the affective instability borderline personality trait is associated directly with bipolar disorder, although impulsivity traits are not (Benazzi 2007). In the same vein, the existence of a spectrum between bipolar disorder and the mood lability of borderline personality disorder has been proposed by Benazzi (2004).

These are just some examples of our increasing understanding of mental disorders as heterogeneous syndromes with shared clusters of susceptibility genes that may be activated in different combinations to yield clinical pictures that may straddle several disorders. The

argument that an overall categorical approach merged with an underlying dimensional classification system could help to describe such a view of mental disorders has been made multiple times in the literature (Kessler 2002, Kendler & Jablensky 2010, Jablensky 2012, Regier 2012). Hempel noted as early as 1961 that most classification systems begin with a categorical approach and move to dimensional views as detail and accuracy improves. A tandem classification system with categorical groups could potentially reduce the complexity of a purely dimensional system, critically maintaining convenience and ease of use for clinicians, while introducing a scoring system that could evaluate the severity of symptoms within a single disorder and the relative severity of the multiple syndromes the patient presents with, yielding 'patient specific diagnosis profiles' (Regier 2012). This overhaul is clearly no small feat, and we shall leave the suggestions of how best to proceed to more distinguished and clear-thinking authors (Kessler 2002, Helzer et al. 2006, Kendler & Jablensky 2010, Jablensky 2012).

A FINAL CONSIDERATION

But what of the patients for whom this debate has real and immediate implications? Let us finish by returning to the patients we encountered, whose subthreshold bipolar symptoms, personality trait symptoms and possible prodromal psychosis symptoms were seemingly condemning her to an awkward limbo of unsatisfactory diagnosis and treatment. One might consider that despite the lack of a clear diagnosis, these symptoms that were having a significant impact on her life and safety might be practically tackled using clinical discretion. A low-dose antipsychotic such as quetiapine is the mainstay of pharmacological treatment in prodromal psychosis, while quetiapine is also an approved alternative to anticonvulsants in bipolar spectrum disorder, particularly in women of childbearing age. It has also been suggested that in addition to first-line psychotherapy, medication such as anti-psychotics including quetiapine may be indicated in personality disorders if comorbid psychiatric conditions exist (Davidson et al. 2000, Tyrer 2000). Thus, regardless of which categorical diagnosis the clinician might consider for this patient, the potential treatment that could be considered is ultimately similar, although the ethics of giving a label and pharmacology to patients with subthreshold symptoms should be addressed.

CONCLUSION

We are on the cusp of an exciting shift in the way we consider and classify mental disorders. A growing body of evidence supports the idea that many mental disorders lie on a spectrum, or series of spectra, linked by shared genetics, much as Kraepelin envisaged with his organ pipe analogy. The ICD-11 and DSM-V

classification systems should reflect this with a move to a more dimensional approach. However, in the midst of the wider debate about dimensional and categorical classification systems, it is interesting to note that in some patient cases, the most practical management is ultimately similar regardless of which classification system brings us to that conclusion.

Acknowledgements: None.

Conflict of interest: None to declare.

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