

Heterogeneity in psychiatric diagnostic classification

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ABSTRACT

The theory and practice of psychiatric diagnosis are central yet contentious. This paper examines the heterogeneous nature of categories within the DSM-5, how this heterogeneity is expressed across diagnostic criteria, and its consequences for clinicians, clients, and the diagnostic model. Selected chapters of the DSM-5 were thematically analysed: schizophrenia spectrum and other psychotic disorders; bipolar and related disorders; depressive disorders; anxiety disorders; and trauma- and stressor-related disorders. Themes identified heterogeneity in specific diagnostic criteria, including symptom comparators, duration of difficulties, indicators of severity, and perspective used to assess difficulties. Wider variations across diagnostic categories examined symptom overlap across categories, and the role of trauma. Pragmatic criteria and difficulties that recur across multiple diagnostic categories offer flexibility for the clinician, but undermine the model of discrete categories of disorder. This nevertheless has implications for the way cause is conceptualised, such as implying that trauma affects only a limited number of diagnoses despite increasing evidence to the contrary. Individual experiences and specific causal pathways within diagnostic categories may also be obscured. A pragmatic approach to psychiatric assessment, allowing for recognition of individual experience, may therefore be a more effective way of understanding distress than maintaining commitment to a disingenuous categorical system.

1. Introduction

Developments and amendments to systems of psychiatric classification can be understood within the perspective of wider social and cultural developments (Foucault, 1967). Amongst other consequences, these socio-political and historical roots have resulted in considerable inherent heterogeneity in a wide range of psychiatric diagnoses during their piecemeal development. For example, there are stark differences between highly specific diagnostic criteria and those with more flexibility around symptom presentation. As a result, there are almost 24,000 possible symptom combinations for panic disorder in DSM-5, compared with just one possible combination for social phobia (Galatzer-Levy and Bryant, 2013). Olbert and colleagues (2014) also report considerable heterogeneity within the criteria of individual diagnoses, showing that in the majority of diagnoses in both DSM-IV-TR and DSM-5 (64% and 58.3% respectively), two people could receive the same diagnosis without sharing any common symptoms. Such 'disjunctive' categories have been described as scientifically meaningless. Bannister, for example, pointed out as early as 1968 that the 'schizophrenia' construct was '[a] semantic Titanic, doomed before it sails, a concept so diffuse as to be unusable in a scientific context', largely because 'disjunctive categories are logically too primitive for scientific use' (Bannister, 1968, pp. 181–182). Young et al. (2014) memorably calculate that in the DSM-5 there are 270 million combinations of symptoms that would meet the criteria for both PTSD and major depressive disorder, and when five other commonly made diagnoses are seen alongside these two, this figure rises to one quintillion symptom combinations - more than the number of stars in the Milky Way. Diagnostic heterogeneity is problematic for both research and clinical practice. The limitations of focusing research on broad diagnostic categories over specific difficulties or distressing experiences are increasingly clear. Research into the relationship between childhood abuse and subsequent mental health difficulties is hampered by focusing on diagnostic categories (Read and Mayne, 2017), because the associations are between specific experiences and symptoms, which disregard diagnostic clusters. These associations include, for example, relationships between childhood experiences of loss and avoidance/numbing, and between childhood sexual abuse and hyperarousal

(Read and Mayne, 2017). Furthermore, extensive research in psychosis demonstrates specific causal pathways, including between childhood sexual abuse and hearing voices, and institutionalisation and paranoia (Bentall et al., 2012). Longstanding focus on diagnostic categories means that evidence-based recommendations for interventions, both drug treatment and psychological therapies, are typically organised by diagnosis (e.g. National Institute for Health and Care Excellence, 2005; NICE, 2009), rather than on specific patterns or presentations of distress, thus recommendations are broad brush rather than individualised. The clinical implications of these diagnostically focused recommendations are twofold. First, clients may be referred for a brief psychological intervention for depression, for example, that follows a low intensity cognitive behavioural therapy protocol for depression (NICE, 2009), with little scope for individualised adaptations according to the specific difficulties experienced by the client. Second, clinicians must use alternative methods of clinical decision-making to counter the limitations of heterogeneous diagnostic categories. Drug prescriptions are rarely made on the basis of a broad diagnosis, but instead according to the specific symptom presentation of the client (Taylor, 2016). Similarly, more specialised psychological therapy delivered by a clinical psychologist, for example, is guided by nuanced clinical formulation. Even psychiatrists may use a 'diagnostic formulation' to further expand upon the broad diagnostic category offered. Diagnostic heterogeneity is considered in this paper within the ways that the formal protocol of classification is applied in clinical practice to serve particular functions, and the impact that heterogeneity can have in the potential "slippage" (Star and Lampland, 2009, p. 15) between the two (Suchman, 1987). This study therefore examined the sources of heterogeneity within and across diagnostic categories. The consequences of heterogeneity were investigated; for clinicians, clients, and the theoretical conceptualisation of psychiatric diagnoses.

2. Method

For the purposes of manageability, this analysis focussed on five chapters of DSM-5: schizophrenia spectrum and other psychotic disorders; bipolar and related disorders; depressive disorders; anxiety disorders; and trauma- and stressor-related disorders. These chapters were chosen to reflect commonly reported 'functional' psychiatric diagnoses as highlighted by the Adult Psychiatric Morbidity Survey, including 'common mental disorders', depression- and anxiety-related diagnoses (Stansfeld et al., 2016), and PTSD, bipolar, and psychotic disorder diagnoses (McManus et al., 2016). One common diagnosis (McManus et al., 2016) that is not contained within the included chapters is 'obsessive-compulsive disorder'. Although previously listed within anxiety disorders in the DSM-IV-TR (American Psychiatric Association, 2000), the DSM-5 lists this diagnosis within its own chapter (obsessive-compulsive and related disorders), which contains numerous other diagnoses that are new and less common, such as 'trichotillomania' (hair pulling) and 'excoriation' (skin picking). This chapter, therefore, was excluded for the purposes of this analysis. Childhood diagnoses (e.g. 'reactive attachment disorder'; 'disruptive mood dysregulation disorder') were also excluded to enable consideration

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of diagnostic categories with the potential for consistency across assessment and reporting (for example, self-reporting of distress).

2.1. Analysis

Thematic analysis (Braun and Clarke, 2006) was used to code themes or patterns of meaning across the diagnostic categories being analysed, with a particular focus on the heterogeneity or differences across the types of diagnostic criteria. Thematic analysis was used to identify the ways in which heterogeneity was represented across diagnostic categories, and to organise this heterogeneity into central themes of differences across the criteria. The first phase of the analysis focused on identifying heterogeneity or differences between the diagnostic criteria of each category within the five chapters analysed. Four areas of heterogeneity were identified within specific diagnostic criteria, and two that spanned across diagnostic categories. During this phase of coding, data were extracted from each set of diagnostic criteria in each of the five chapters, and coded line by line to the themes above. Subthemes were generated from the information within two codes (Standards to which symptoms are compared, and Duration of symptoms) as different ways of representing these themes emerged across diagnostic categories. The emergent coding framework was reviewed by authors PK and RC, with the aim of presenting alternative interpretations of the data. The coding framework was refined accordingly following discussions.

3. Findings

Heterogeneity in diagnostic criteria was found across each of the chapters of the DSM-5 that were examined; both within specific types of criteria, and more broadly across diagnostic categories. These themes are outlined in Table 1. Unless otherwise specified, page numbers refer to the DSM-5.

3.1. Heterogeneity within specific diagnostic criteria

3.1.1. The standards to which symptoms are compared

A key element of heterogeneity stems from differences in the comparison of the experience of symptoms with subjectively normal or assumed normative functioning (or in the omission of such comparators). Diagnostic criteria are represented either by no comparator, or a change from previous functioning, behaviour, or mood. In particular, some experiences (such as low mood) are seen as problematic only at a particular threshold, while other experiences (such as hallucinations) are indicative of disorder by their presence alone (Table 2).

3.1.1.1. Comparisons with prior experience. Most criteria specifying either change or comparisons with prior functioning or experience are mood-related (criteria which are also included within the diagnosis of schizoaffective disorder). Some descriptions explicitly note a comparison, for example, criterion A for a major depressive episode states, “[f]ive (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning” (p. 160). Other criteria imply a comparison with previous mood, for example, criterion A for persistent depressive disorder (dysthymia) requires “[d]epressed mood for most of the day...” (p. 168); criterion A for a manic episode requires “[a] distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased goal-directed activity or energy” (p. 124); criteria B2 and B3 for both manic and hypomanic episodes are “decreased need for sleep...” and “more talkative than usual...” (p. 124) respectively. Each of these implies comparison with a usual or acceptable behaviour or mood, such as sleep, which is altered to a problematic extent. Some of the criteria for schizophreniform disorder

Table 1

Outline of themes and subthemes.

Heterogeneity within specific diagnostic criteria

The standards to which symptoms are compared
 Comparisons with prior experience
 Comparison with socially expected responses
 No comparators
 Duration of symptoms
 Minimum duration
 No duration
 Discrete episodes
 Identifiers of severity
 Perspective from which distress is assessed

Heterogeneity across diagnostic categories

Symptom overlap across categories

The role of trauma

and schizophrenia diagnoses also imply a change from usual mood or motivation, including ‘negative symptoms’, described as “diminished emotional expression or avolition” (p. 99).

3.1.1.2. Comparison with socially expected responses. Within mood episodes, and criteria for some anxiety and trauma-related diagnoses, there is a notion of ‘excessive’ behaviours or responses, suggesting a comparison with a socially expected response. For example, criterion B7 of manic and hypomanic episodes requires “excessive involvement in activities that have a high potential for painful consequences (e.g. engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments)” (p. 124). Criterion B7 of a major depressive episode assesses “feelings of worthlessness or excessive or inappropriate guilt...” (p. 125). Separation anxiety disorder similarly assesses “persistent and excessive worry” (A2, p. 190). In another way of assessing a person’s response in comparison with expected responses, specific phobia and adjustment disorder both require the response to be “out of proportion” (pp. 197, 286), with either the object or situation (social phobia) or the stressor (adjustment disorder). A subjective judgement is required to assess whether a person’s experiences are out of line with typically expected responses. This is discussed further in the theme of ‘Perspective from which distress is assessed’.

3.1.1.3. No comparators. By contrast, other criteria do not compare symptoms with a person’s previous experience. This is particularly apparent for ‘positive symptoms’ of psychosis; the presence of delusions and hallucinations, for example, is never stated in diagnostic criteria alongside comparison. Non-compared examples from mood disorder diagnoses include “feelings of worthlessness” or “recurrent thoughts of death...” (criteria A7 and A9, respectively, of a major depressive episode), and “flight of ideas...” or “distractibility...” (criteria B4 and B5, respectively, of manic and hypomanic episodes). The mood disorders chapters give a mixed presentation of criteria with both comparators and no comparators. Three or more of the experiences described in criterion B must be present for identification of a manic or hypomanic episode, meaning that presentations of these episodes could reflect either discontinuous experiences, experiences across a continuum, or a mixture of the two. The criteria for PTSD and acute stress disorder notably omit comparators; “[r]ecurrent, involuntary, and intrusive distressing memories of the traumatic event(s)” (B1, e.g. p. 271) and “dissociative reactions (e.g. flashbacks)...” (B3, e.g. p. 271) are examples of criteria for both these diagnoses that are compared with neither expected responses nor prior functioning. By not using comparators, these experiences are set up as inherently disordered or pathological and so are inconsistent with continuum models of functioning.

The diagnostic criteria for PTSD and acute stress disorder nevertheless require a change in thoughts, behaviours and emotions following trauma. The criteria are also explicit about the severity of trauma experienced, after which it would be expected that most people would experience distress. However, there are no comparators to identify what a ‘normal’ or ‘appropriate’ response to such a severe stressor would entail. That is, there is no information about how to identify at what point someone has a ‘disordered’ response as opposed to one that is ‘normal’. In the case of the criteria for panic disorder, behaviour change related to panic attacks is constructed as unusual or unacceptable by what is described as ‘maladaptive’ criteria, despite this behaviour (such as “behaviors designed to avoid having panic attacks”, p. 208) representing attempts to cope with the experience of panic attacks.

3.1.2. Duration of symptoms

There were three subthemes representing heterogeneity within the duration of symptoms or experiences described by diagnostic criteria in the DSM-5: no duration, discrete episodes, and a minimum duration. These timeframes effectively construct different ‘kinds’ of disorder categories (Table 3).

3.1.2.1. Minimum duration. Most of the analysed diagnostic categories have a minimum duration requirement. For example, continuous signs of disturbance for at least 6 months (schizophrenia, Criterion C), or at least 2 years of depressed mood (persistent depressive disorder - dysthymia - Criterion A). In the absence of other indicators of ‘disorder’ (such as biomedical markers), a minimum duration requirement constructs a definition of severity. Giving a minimum duration criterion creates a way of separating between ‘everyday’ distress and that which is considered ‘clinical’, or otherwise abnormal and therefore in need of support.

Table 2

The standards to which symptoms are compared.

| Subtheme | Example from DSM-5 |
|---|---|
| Comparisons with prior experience | Major depressive episode: “[f]ive (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning” (Criterion A, p. 160). Persistent depressive disorder (dysthymia): “[d]epressed mood for most of the day...” (Criterion A, p. 168) Manic episode: episode requires “[a] distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased goal-directed activity or energy” (Criterion A, p. 124) |
| Comparison with socially expected responses | Manic and hypomanic episodes: “decreased need for sleep...” and “more talkative than usual...” (Criteria B2 and B3, p. 124) Manic and hypomanic episodes: “excessive involvement in activities that have a high potential for painful consequences (e.g. engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments)” (Criterion B7, p. 124) Major depressive episode: “feelings of worthlessness or excessive or inappropriate guilt...” (Criterion B7, p. 125) Separation anxiety disorder: “persistent and excessive worry” (Criterion A2, p. 190) |
| No comparators | Major depressive episode: “feelings of worthlessness” or “recurrent thoughts of death...” (Criteria A7 and A9, p.125) Manic and hypomanic episodes: “flight of ideas...” or “distractibility...” (Criteria B4 and B5, p.124) PTSD and acute stress disorder: “[r]ecurrent, involuntary, and intrusive distressing memories of the traumatic event(s)” or “dissociative reactions (e.g. flashbacks)...” (B1, e.g. p. 271) and (B3, e.g. p. 271) |

Table 3

Duration of symptoms.

| Subtheme | Example from DSM-5 |
|-------------------|--|
| Minimum duration | Schizophrenia: “Continuous signs of disturbance for at least 6 months” (Criterion C, p. 99) Persistent depressive disorder (dysthymia): “at least 2 years of depressed mood” (Criterion A, p. 139) |
| No duration | Difficulties ‘due to other medical conditions’: All chapters, with the exception of trauma-related disorders |
| Discrete episodes | Brief psychotic disorder: A specific duration such as one day to one month (Criterion B, p. 94) Acute stress disorder: 3 days to 1 month after trauma exposure (Criterion C p. 281). Adjustment disorders: The symptoms associated with must occur within 3 months of a stressor and not persist for more than 6 months “once the stressor and its consequences have terminated” (Criterion E, p.287) The bipolar and related disorders chapter (including, e.g. cyclothymia) and the category of major depressive disorder are unique in that several episodes are combined in various ways to produce disorders presented as distinct from one another. |

3.1.2.2. No duration. The criteria for certain diagnoses do not use a timeframe. For example, each chapter (with the exception of traumarelated disorders) includes difficulties ‘due to other medical conditions’, with no particular duration needed to meet these criteria. These diagnoses must be the ‘direct pathophysiological consequence of another medical condition’ (e.g. p. 120). This use of physiological signs set these diagnoses apart from other functional diagnoses, suggesting that functional diagnoses use timeframes to bolster descriptive diagnoses in the absence of physiological markers. Other diagnoses that do not require a particular duration are ‘other specified’ and ‘unspecified’ diagnoses at the end of each of chapter. These categories have very broad criteria because they are specifically included to incorporate difficulties that do not meet the criteria for other diagnoses. The experiences have to be characteristic of other diagnoses in their chapter, and cause clinically significant distress or impairment in functioning (discussed later). However, the ‘unspecified’ diagnoses do not list any criteria, leaving these categories entirely open to clinical judgement. The ‘other specified’ diagnoses for the schizophrenia spectrum and other psychotic disorders, bipolar and related disorders and anxiety disorders chapters give options, without durations, for specified difficulties. For example, ‘persistent auditory hallucinations occurring in the absence of any other features’, a much briefer criterion than those used for the other diagnoses within the schizophrenia spectrum and other psychotic disorders chapter.

3.1.2.3. Discrete episodes. Least common are diagnoses that represent discrete episodes, with a specific duration such as one day to one month (e.g. brief psychotic disorder) or 3 days to 1 month after trauma exposure (acute stress disorder p. 281). The symptoms associated with adjustment disorders must occur within 3 months of a stressor and not persist for more than 6 months “once the stressor and its consequences have terminated” (Criterion E, p. 287). These episodic diagnoses suggest either an expectation of an end point that is not present for those with a minimum duration, or, more pragmatically, allow difficulties to be diagnosed (and treated) before the minimum time period is reached for other diagnoses such as PTSD. Bipolar and depressive disorders are treated differently again. The bipolar and related disorders chapter (including, e.g. cyclothymia) and the category of major depressive disorder are unique in that several episodes are combined in various ways to produce disorders presented as distinct from one another. Major depressive and manic episodes are the two key episodes from which hypomanic episode (shorter duration and lesser severity than manic episode) and a mixed features specifier (criteria are met for one episode, with features of another during the same timeframe) are derived. The three episodes are then variously combined to create eight different diagnostic categories (seven bipolar related diagnoses, and major depressive disorder).

3.1.3. Identifiers of severity

In some cases, severity indicators are prioritised over duration requirements, for example, where hospitalisation or the presence of

psychotic features render consideration of duration unnecessary (manic episodes and bipolar and related disorders due to another medical condition). Most categories stipulate a criterion of “clinically significant distress or impairment in social, occupational, or other important areas of functioning” (e.g. criterion B, major depressive disorder, p. 161), to establish a particular threshold for diagnosis (p. 21). However, the threshold is not defined, and therefore represents a subjective judgement, presumably the clinician's. A separate concept of a marked change in social, occupational or other areas of functioning (schizophrenia; manic episode) allows the criterion to be met in the absence of distress. These variations across criteria demonstrate the pragmatic nature of diagnostic categories and their use as clinical tools. For example, if a person's behaviour is distressing to others, but not to themselves, the clinician has the flexibility to override the need for clinically significant distress and make the diagnosis regardless (Table 4).

DSM-5 contains a dimensional severity rating of 0–4 for each criterion A symptom for delusional, brief psychotic, schizophreniform and schizoaffective disorder criteria. This may, for example, relate to either the pressure to respond to voices or delusions or to what extent the individual is bothered by this experience. For other experiences, such as disorganised speech, the rating is pragmatically based on clinical observation rather than the individual's experience of these difficulties, so that the individual is not required to recognise their own disordered speech. Other mood-related diagnoses (bipolar, major depression, and related disorders) can be rated using a broad dimensional specifier of mild, moderate, severe, or with psychotic features.

3.1.4. Perspective from which distress is assessed

This theme describes the point of view from which distress or other diagnostic criteria are assessed, for example, from the account of the individual being assessed, others around them (e.g. family or friends), or the assessing clinician. In general, the DSM-5 represents a shift towards the perspective of the observer, whereas several DSM-IV-TR diagnoses relied on the individual as the principal (or only) source of information. For example, for DSM-IV-TR social phobia (social anxiety disorder in DSM-5), reference is made to “marked distress about having the phobia” (criterion E) and that the “person recognises that the fear is excessive or unreasonable” (criterion C). In comparison, whilst the fears themselves are self-reported in the DSM-5 version of social anxiety disorder, the criteria otherwise rely on the perspective of the observer. Represented within this shift towards the perspective of the observer is an assumption about insight and the capacity to self-report; an assumption frequently associated with psychotic experiences. However, this assumption is not explicitly stated in the diagnoses, and therefore reinforces the fallacious assumption that all people experiencing mental health problems tend to ‘lack insight’. Thus, the distress criterion is removed and the individual need not recognise that their fear is excessive, as the clinician makes this judgement. In another example,

Table 4

Identifiers of severity.

| Method of identifying severity | Example from DSM-5 |
|---------------------------------|--|
| Clinically significant distress | Major depressive disorder; Post-traumatic stress disorder; Acute stress disorder: "Clinically significant distress or impairment in social, occupational, or other important areas of functioning" (e.g. Criterion B, p. 161) |
| Marked change | Schizophrenia: "For a significant portion of the time since the onset of the disturbance, level of functioning in one or more major areas, such as work, interpersonal relations, or self-care, is markedly below the level achieved prior to the onset..." (Criterion B, p. 99) Manic episode: "marked impairment in social or occupational functioning..." (Criterion C, p. 124) |
| Dimensional severity rating | Delusional, brief psychotic, schizophreniform and schizoaffective disorders: Dimensional severity rating of 0–4 for each Criterion A symptom for criteria. This may, for example, relate to either the pressure to respond to voices or delusions or to what extent the individual is bothered by this experience. For other experiences, such as disorganised speech, the rating is pragmatically based on clinical observation rather than the individual's experience of these difficulties |
| Dimensional specifier | Mood-related diagnoses (bipolar, major depression, and related disorders): Can be rated using a broad dimensional specifier of mild, moderate, severe, or with psychotic features. |

reference to "excessive involvement in activities that have a high potential for painful consequences (e.g. engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments)" (manic and hypomanic episodes, p. 124) constructs a socially accepted level at which the behaviours are considered normal versus abnormal. The perspective here demonstrates the power held by the assessing clinician (or others, such as family) by virtue of the diagnostic criteria sanctioning the making of a value judgement. For other diagnoses, this person's perspective is implied but not explicit, for instance, experiences such as distress and distressing memories, flashbacks and physiological reactions (PTSD, Criterion B). Finally, in many cases, the question of perspective (who is making the judgment as to whether the criterion is met) is unambiguously ambiguous, as in the case of major depressive episode; "as indicated by subjective report... or observation made by others". In a pragmatic approach, information is collected, from a range of sources, to assess whether or not the diagnostic criteria are met (Table 5).

3.2. Wider heterogeneity across diagnostic categories

3.2.1. Symptom overlap across categories

Similar or the same experiences occur in multiple diagnostic categories. Major depressive episode, for example, features within the criteria for major depressive disorder, bipolar and related disorders, and can be included within the criteria for schizoaffective disorder (for which criterion A requires the occurrence of "a major mood episode (major depressive or manic)", p. 105). Likewise, hallucinations can occur in schizophrenia and other psychotic disorders, but also in major depressive disorder with psychotic features, bipolar and related disorders (except cyclothymia), and PTSD (Table 6).

DSM-5 refers to bipolar disorders bridging between psychotic disorders and depressive disorders, and likewise that schizoaffective disorder bridges several diagnoses. Despite this repetition of experiences, there is no explicit statement provided in the DSM about the phenomenological or qualitative experience of symptoms across different diagnoses. The DSM-5 acknowledges,

Although DSM-5 remains a categorical classification of separate disorders, we recognize that mental disorders do not always fit completely within the boundaries of a single disorder. Some symptom domains, such as depression and anxiety, involve multiple diagnostic categories and may reflect common underlying vulnerabilities for a larger group of disorders... (p. xli)

Ten specifiers are provided with the DSM-5 to allow the clinician to represent other patterns not contained within the main diagnostic criteria for bipolar and major depressive disorders, such as with anxious distress, rapid cycling (for bipolar and related disorders), or psychotic features. The range of experiences incorporated within these specifiers acknowledges the heterogeneity of diagnoses. Depressive episodes are no longer required in DSM-5 criteria for bipolar I, and the diagnostic criteria for cyclothymic disorder incorporates only experiences that are sub-threshold for both hypomania and a major depressive episode. These changes and the additional specifier of 'anxious distress' for bipolar and MDD diagnoses represents a shift towards broadening the range of experiences captured by the same diagnostic labels. The 'mixed features' specifier further blurs the boundary between depression and bipolar diagnoses in that it can be added to episodes of depression within the context of major depressive disorder where there are symptoms of mania or hypomania present. Likewise, panic attacks can be used as an adjunct to any DSM-5 diagnosis, and catatonia can be specified across various diagnoses spanning several chapters (including neurodevelopmental, psychotic, bipolar, and depressive disorder diagnoses, and other medical conditions).

3.2.2. The role of trauma

The DSM-5 states at the outset the atheoretical nature of diagnostic categories, however, one chapter of diagnoses is explicitly framed as caused by or directly influenced by external factors; trauma- and stressor-related disorders. The conceptualisation constructed by this addition of causal information is a notable difference from the other analysed chapters. For example, despite PTSD being described as a response to an extreme traumatic stressor that would be distressing for anyone to experience ("Exposure to actual or threatened death, serious injury, or sexual violence..." criterion A, p. 271), in assigning the diagnosis the individual's response is categorised as disordered. A related dilemma can be seen in the remarkable semantic similarity between various criteria for schizophrenia and PTSD diagnoses in DSM-5. These include affective flattening and avolition, as well as hallucinations, dissociative flashback episodes, restricted range of affect, and markedly diminished interest or participation in significant activities. All of these experiences would, in the presence of a traumatic event, be broadly consistent with a diagnosis of PTSD. Furthermore, Table 7 illustrates the diagnoses explicitly associated with trauma in DSM-5, and the DSM-5 diagnoses that have been associated with childhood trauma or adverse life experiences.

4. Discussion

As the DSM-5 acknowledges that experiences do not always fit within the boundaries of a specific disorder, its rules are therefore internally inconsistent. The manual presents a classification of discrete, homogeneous disorders, yet acknowledges that this structure cannot always be followed due to the overlap between diagnostic categories. Much of the heterogeneity identified in the above analysis is borne out of pragmatic consideration for the application of the DSM-5 into clinical practice. These allowances introduce flexibility for the clinician; giving the possibility of categorising extraneous symptoms that do not fit neatly within a diagnosis, or identifying experiences or behaviours as distressing or disruptive for others despite not necessarily being distressing for the individual being assessed. Yet, this heterogeneous flexibility has important consequences for the diagnostic classification's model of discrete disorders and the way cause is understood.

4.1. Theoretical implications: threats to the model of discrete disorders

The introduction of methods of clinical flexibility and transdiagnostic clinical features, such as 'anxious distress' or 'psychotic features', are contradictory to the DSM-5's underpinning model of discrete disorders. Within diagnostic criteria, the same diagnosis may be applied in different ways by the clinician to suit individual situations and presentations. Whilst clinically practical, such criteria introduce heterogeneity and detract from the DSM-5's presentation of diagnoses as rigorously and consistently applied criteria that represent stable, homogeneous disorders. In respect of these threats to the diagnostic model whereby clinical utility is prioritised over theoretical consistency, it would be more useful to adopt an assessment approach that embraces this pragmatism, without simultaneously attempting to do this within the confines of a strict diagnostic model.

4.2. Clinical implications: understanding cause

By making reference to trauma or stressors only in one dedicated chapter, the DSM-5 implies that other diagnostic categories are unrelated to trauma. The consideration of social, psychological, or other adversities within diagnoses is therefore minimised; symptoms are constructed as anomalous or disordered, rather than potentially understandable in relation to a person's life experiences. Even within the trauma- and stressor-related disorders chapter, the experiences assessed, despite being specifically linked with trauma, are seen as symptomatic of a disordered or inappropriate response to that trauma.

Table 5

Perspective from which distress is assessed.

| Subtheme | Example from DSM-5 |
|-----------------------------------|---|
| Self-report | Manic and hypomanic episodes: "decreased need for sleep (e.g. feels rested after only 3 h of sleep)" (Criterion B2, p. 124) Persistent depressive disorder (dysthymia): e.g. "low energy" (Criterion B2, p. 168; "low self-esteem" (Criterion B4, p. 168) Pre-menstrual dysphoric disorder: e.g. "marked irritability..." (Criterion B2, p. 172; "lethargy" (Criterion C3, p. 172) Panic disorder: "persistent concern or worry about additional panic attacks..." (Criterion B1, p. 208) Generalised anxiety disorder: "the individual finds it difficult to control the worry" (Criterion B, p. 222) |
| Clinician's judgement | Post-traumatic stress disorder: "e.g. "recurrent, involuntary, and intrusive distressing memories of the traumatic event" (Criterion B1, p. 271) Manic and hypomanic episodes: "During the period of mood disturbance... the following symptoms... are present to a significant degree and represent a noticeable change from usual behaviour" (Criterion B, p. 124) Major depressive episode & Major depressive disorder: "psychomotor agitation or retardation... observable by others; not merely subjective feelings of restlessness or being slowed down" (Criterion A5, p. 161) Separation anxiety disorder: "Developmentally inappropriate and excessive fear or anxiety..." (Criterion A, p. 190) |
| Ambiguous or unstated perspective | Manic and hypomanic episodes: "inflated self-esteem or grandiosity" "distractibility... as reported or observed"; "Excessive involvement in activities that have a high potential for painful consequences (e.g. engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments)" (Criteria B1; B5, and B7, respectively, p. 124) Major depressive episode & Major depressive disorder: "Depressed mood... as indicated by either subjective report... or observation by others..."; "Markedly diminished interest or pleasure... as indicated by either subjective account or observation"; "Feelings of worthlessness or excessive or inappropriate guilt..."; "Diminished ability to think or concentrate... either be subjective account or as observed by others" (Criteria A1, A2, A7, and A8, respectively, p. 160-1) Specific phobia & social anxiety disorder (social phobia): "The fear or anxiety is out of proportion to the actual danger posed by the specific object or situation and to the sociocultural context" All schizophrenia & psychotic disorders; Presence of hallucinations and/or delusions |

Table 6

Symptom overlap across categories.

| Specifier | Diagnostic categories to which this specifier can be added |
|--------------------|---|
| Anxious distress | Bipolar and related disorders Depressive disorders |
| Psychotic features | Bipolar and related disorders Depressive disorders Schizophrenia spectrum and other psychotic disorders Trauma and stressor related disorders Neurocognitive disorders Personality disorders |
| Rapid cycling | Bipolar and related disorders |
| Mixed features | Depressive episode Bipolar and related disorders |
| Panic attacks | Anxiety disorders |
| Catatonia | Any DSM-5 diagnosis Neurodevelopmental disorders Psychotic disorders Bipolar disorder Major depressive disorder Other medical conditions |

The reverse of the implications of singling out one trauma-related chapter is acknowledged by Spitzer and First; in their response to the suggestion of clustering diagnostic categories by cause, they stated: Most problematic is the characterization of the first cluster as patients with "brain disease." Psychiatry has abandoned the reductionist "organic" vs "functional" distinction and now regards all mental disorders as disorders of brain function. It would be a big leap backward to delineate a subgroup of DSM disorders as involving "brain disease" with the implication that in other mental disorders brain functioning is unimpaired (Spitzer and First, 2005, p. 1898).

By the same logic the same can be said of the role of trauma; for the majority of the DSM-5 diagnostic categories, the criteria suggest to clinicians that these difficulties are caused by the disorder (and implicitly that these disorders are associated with brain function), and may therefore limit exploration further than identification of the disorder. However, just as Wakefield (2013) describes how stressors other than grief might also be related to experiences of low mood and depression, accumulating evidence demonstrates that trauma or adversity is involved in the development of many conditions and symptoms including psychosis and bipolar disorder (Bentall et al., 2012; Palmier-Claus et al., 2016; Varese et al., 2012). Clinical implications may include a focus on symptom reduction, on reducing those experiences seen as inherently disordered, such as voice hearing, rather than on removing only the distress associated with the experiences. In addition, labelling distress as abnormal may in itself create further distress. For example, flashbacks in the context of trauma are distressing in

themselves, but the diagnosis has the potential to make the experience more distressing because the flashbacks are regarded as abnormal. Furthermore, by obscuring heterogeneity within categories, psychiatric diagnoses arguably obscure causal heterogeneity or other key differences between individuals (Olbert et al., 2014). Evidence already suggests that there may be distinct pathways in the development of specific experiences identified within the diagnostic criteria of schizophrenia, for example, strong associations between childhood sexual abuse and hallucinations, compared with childhood neglect or institutionalization and paranoia (Bentall et al., 2014). Likewise, in the drive to create unique diagnostic entities by separating collections of experiences from each other, potentially important similarities in the experiences, or even processes, that exist across diagnoses may be lost. An example of this may include similar causal mechanisms for voicehearing by individuals diagnosed with either bipolar disorder or schizophrenia (e.g. Hammersley et al., 2003).

5. Conclusions

This analysis of chapters of the DSM-5 demonstrates that multiple forms of heterogeneity are found across and within diagnostic categories. This heterogeneity has important implications for research, clinical practice, and the provision of care that is specific to a person's individual needs. Pragmatic diagnostic criteria and idiosyncrasies offer flexibility for psychiatrists to use 'clinical judgement', but they undermine the model of discrete categories of disorder. Yet the diagnostic model still has implications for the way that cause is understood; limited reference to trauma implies that it affects only a limited number of diagnoses, despite increasing evidence to the contrary. Furthermore, by focusing on diagnostic categories, individual experiences of distress and specific causal pathways may be obscured. A pragmatic approach to psychiatric assessment, which allows for recognition of individual experience, may therefore be a more effective way of understanding distress than maintaining a commitment to a disingenuous categorical system.

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Relationship between DSM-5 diagnoses and trauma.

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| DSM-5 diagnoses with explicit mention of trauma | DSM-5 diagnoses with associations with childhood adversities/ trauma, demonstrated through meta-analyses |
| Acute stress disorder | Depression (Mandelli et al., 2015) |
| PTSD | Anxiety (Lindert et al., 2013) |
| Adjustment disorders | Obsessive compulsive disorder (OCD) (Miller and Brock, 2017) |
| | Non-suicidal self-harm (Liu et al., 2016) |
| | Functional neurological (conversion) disorders / medically unexplained symptoms (Ludwig et al., 2018) |
| | Dissociation (Rafiq et al., 2018; Vonderlin et al., 2018) |
| | Eating disorders (Molendijk et al., 2017) |
| | Schizophrenia and psychotic disorders (Varese et al., 2012) |
| | Bipolar disorder and related disorders (Palmier-Claus et al., 2016) |

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Dr Allsopp reports grants from University of Liverpool and Pearson Clinical Assessment during the conduct of the study. Professor Read was employed by the University of Liverpool when the work presented in this paper was undertaken. He is now employed by the University of East London. He is on the Boards of the International Society for Psychological and Social Approaches to Psychosis (UK branch), the Hearing Voices Network - England, and the International Institute for Psychiatric Drug Withdrawal, and is a member of the Council for Evidence-based Psychiatry. Professor Corcoran is employed by the University of Liverpool. She is part funded by the National Institute of Health Research Collaborative Leadership in Applied Health Research and Care North West Coast (NIHR CLAHRC NWC). The views expressed are those of the authors and not necessarily those of the NHS or NIHR. She also receives funding from the Economic and Social Research Council and from Mersey Care NHS Foundation Trust. She is a Trustee of the Liverpool Mental Health Consortium. Professor Kinderman is employed by the University of Liverpool, and has received funding from a number of research charities and Councils. He is a former President of the British Psychological Society, a member of the Council for Evidence-based Psychiatry and a trustee of the Joanna Simpson Foundation. He is an honorary consultant clinical psychologist with Mersey Care NHS Trust, and works occasionally for the BBC.

CRediT authorship contribution statement

Kate Allsopp: Data curation, Formal analysis, Writing - original draft. John Read: Writing - review & editing. Rhiannon Corcoran: Writing - review & editing. Peter Kinderman: Writing - review & editing.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.psychres.2019.07.005.

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