

The utility of psychiatric diagnosis

Diagnostic classifications in clinical practice and research in relation to eating disorders

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Abstract

The validity of psychiatric diagnoses has been challenged because of a generally low validity of the existing diagnostic categories. However, it is important to distinguish between the validity and the utility of the psychiatric diagnostics. Although the validity of most contemporary psychiatric diagnoses is generally low and characterized by a low degree of natural boundaries, this does not mean that most psychiatric diagnoses are not useful concepts. The aim of this article is to focus on the utility of psychiatric diagnoses. This utility will be demonstrated with eating disorders as an example.

Keywords: Utility, validity, psychiatric diagnosis, clinical practice, research

Background

The oldest reference to psychiatric diseases appears in the Ebers papyrus, which is considered to be one of the most important medical papyri of ancient Egypt. In the Ebers papyrus, clinical depression is mentioned briefly. In the 4th century BCE, the Greek physician Hippocrates described all diseases as an imbalance of the four

bodily humours (phlegm, blood, yellow bile, and black bile), of which the body was thought to consist. It was believed that variations in the levels of these four fluids, and how they connected, would cause changes to people's moods. Ancient Greek medicine did not include specialised medical terminology. Instead a descriptive style was used to evoke a picture of a disease (Veith, 1981). The early lack of nomenclature in the understanding of diseases reflected a lack of systematic knowledge of the nature of disease (Jutel, 2009). A more systematic knowledge of disease was first achieved by Thomas Sydenham, often referred to as "the father" of classificatory medicine, and his textbook *Observationes Medicae*. The book became a standard textbook of medicine for more than two centuries. *Observationes Medicae* provided a tool to distinguish a disease from all other distempers. The model of classification that Sydenham followed was inspired by the botanical classification tradition but listed the characteristics of diseases instead (Jutel, 2009). In 1808 the German physician Johann Christian Reil was the first to coin the term *psychiatry*. The term literally means *medical treatment of the soul*, and psychiatry refers to the field of medicine that is focused specifically on the mind. In 1812, Benjamin Rush became an advocate for the humane treatment of the mentally ill with the first American textbook on psychiatry, *Medical Inquiries and Observations Upon Diseases of the Mind*.

According to the American Psychiatric Association (APA), the need to collect statistical information was the initial stimulus for developing a classification system of mental disorders. In the US census of 1840, the recording of the frequency of *idiocy/insanity* could be considered the first official attempt to gather information about mental health in the United States. In 1921, the APA, in collaboration with the New York Academy of Medicine, developed a nationally acceptable psychiatric classification that would be incorporated in the first edition of the American Medical Association's Standard Classified Nomenclature of Disease. This system was designed primarily for diagnosing patients with severe psychiatric and neurological disorders. In order to better incorporate outpatient services for World War II servicemen and veterans (e.g., psychophysiological, personality, and acute disorders), a broader classification system was developed by the US Army (American Psychiatric Association). At the same time, the World Health Or-

ganization (WHO) published the sixth edition of The International Classification of Diseases (ICD) which for the first time, included a section on mental disorders.

According to the American Psychiatric Association, the need for a classification of mental disorders has been evident throughout the history of medicine. However, there has been little agreement on which disorders to include and the optimal method for their organization.

From a medical/psychiatric perspective, the categorization of psychiatric diseases (e.g., psychiatric diagnostics) is emerging from a long historical tradition and expresses a need to understand, assess and treat people who are suffering from mental disorders.

Validity and utility of psychiatric diagnosis as a general concept

The exact meaning of the term *validity* in a psychiatric diagnostic context is unclear, and it has never been adequately clarified (Kendler & Jablensky, 2003). In the 1970s, Eli Robins and Samuel Guze proposed five criteria for establishing the validity of psychiatric diagnoses, namely, i) clinical description, ii) laboratory studies, iii) delimitation from other disorders by means of exclusion criteria, iv) follow-up studies, and v) family studies (Robins & Guze 1970). Later factors, such as molecular genetics and biology, neuroanatomy, and cognitive neuroscience, have been suggested as additional relevant ways to link symptoms and diagnoses (Andreasen, 1995). However, it is generally recognized that the validity of the diagnostic concepts in the classification of mental disorders cannot be taken for granted. Thus, there is little evidence that most mental disorders are separated by natural boundaries, meaning that they are truly discrete entities (Jablensky, 2016). According to Jablensky “most diagnostic concepts in psychiatry have not been demonstrated to be valid in this sense” (Jablensky, 2016). Robert Kendler and Assen Jablensky (2003) emphasize that psychiatry still has to define most disorders by their syndromes. Due to the need to distinguish disorders from each other by differences between their syndromes, the validity of diagnostic concepts remains an important issue (Kendler & Jablensky, 2003).

However, although it may be difficult to do so, it is necessary to distinguish between the extent of validity and the utility of psychi-

atric diagnosis in everyday clinical practice (e.g., assessment and treatment) and research. According to Kendler and Jablensky (2003), the two terms validity and utility should not, as is often the case, be used as though they are synonymous. To determine the utility of psychiatric diagnoses, it is important to define utility in this context. Kendler and Jablensky highlight factors such as information about prognosis and probable outcomes as crucial elements: “[...] a diagnostic rubric may be said to possess utility if it provides non-trivial information about prognosis and likely treatment outcomes, and /or testable propositions about biological and social correlates” (Kendler and Jablensky, 2003).

Paul Meehl (1959) was likely the first to use the term *utility* in the context of psychiatric diagnosis: “the fundamental argument for the utility of formal diagnosis [...] amounts to the same kind of thing one would say in defending formal diagnosis in organic medicine. One holds that there is a sufficient amount of etiological and prognostic homogeneity among patients belonging to a given diagnostic group so that the assignment of a patient to this group has probability implications which it is clinically unsound to ignore” (Meehl, 1959). Thus, Meehl highlights both aetiological and prognostic homogeneity among patients in a given diagnostic group as central to the utility of a diagnosis.

The utility of psychiatric diagnoses can be emphasized in relation to a number of different entities or domains. Diagnoses are relevant to the health professional and clinicians who work with patients suffering from psychiatric disorders, but they also serve as a way to communicate and define the implications of psychiatric difficulties to patients, relatives, and the primary sector (e.g., social service and school). Finally, psychiatric diagnoses may be considered a fundamental prerequisite for research. A precise and explicit definition of symptoms provides an opportunity to examine and compare results between studies. Thus, it is essential to research to confirm that the same conditions are examined and compared. Kendler and Jablensky states that it is “[...] a fundamental requirement of all scientific research that the subject matter of the investigation should be described with sufficient accuracy and in sufficient detail to enable others to repeat the study if they wish to” (Kendler and Jablensky, 2003). Accurate, or at least as accurate as possible, diagnostic criteria and the use of validated assessment tools are essential in

research. Thus, the utility of psychiatric diagnostic criteria is an essential prerequisite for research.

Validity and utility of eating disorder diagnosis

Within the topic of eating disorders, the validity of eating disorder diagnosis has been an ongoing discussion. An eating disorder is characterized by disturbed thinking and behaviour in relation to food, body and weight. Anorexia nervosa and bulimia nervosa are the most commonly described eating disorders. Anorexia nervosa is characterized by a significantly low weight (or stagnation of natural weight development in children and adolescents) caused by a restriction of food intake, fear of gaining weight or becoming fat despite a low body weight, as well as a disturbed body image. Bulimia is characterized by an intake of excessive amounts of food in a relatively short time, accompanied by the feeling of a loss of control, and subsequently compensatory behaviour such as vomiting to counteract weight gain. A binge eating disorder is characterized by an excessive intake of food in a relatively short time without compensatory behaviour such as vomiting (American Psychiatric Association, 2013). It often takes years to recover from an eating disorder, and between 25-50% of the recovered individuals have a relapse. At the same time, approximately 10-15% of the patients have a chronic course of disease. Anorexia nervosa has the highest mortality rate of all psychiatric diseases (Arcelus et al, 2011) with a standardized mortality ratio of 4.37 for lifetime anorexia nervosa and 2.33 for patients with bulimia nervosa with no history of anorexia nervosa (Franko et al, 2013). When the previous DSM-IV nomenclature (American Psychiatric Association, 2000) was applied, approximately 40% to 60% of people seeking treatment for eating disorders fell into the diagnostic category of eating disorder not otherwise specified (EDNOS). EDNOS has similar clinical features to those found in anorexia nervosa or bulimia nervosa but with different symptom combinations and varying degrees of diagnostic acuity (Fairburn & Bohn, 2005; Fairburn et al., 2007; Peebles et al., 2010). A further limitation of the DSM-IV was that it did not adequately capture eating disorder symptoms in children and adolescents (Bravender et al., 2010).

Several revisions aimed to clarify the previous DSM-IV diagnostic criteria for eating disorders were included in the revised version

of the DSM-5 (American Psychiatric Association, 2013). These revisions aimed to reduce the preponderance of EDNOS and increase the validity of diagnostic groups (Call, Walsh, & Attia, 2013). Findings from extensive literature reviews and field trials formed the basis of the revisions for each diagnostic eating disorder category of the DSM-5. These revisions included, among other changes, the elimination of amenorrhea as a requirement for girls (anorexia nervosa), an increased BMI threshold (anorexia nervosa), a decreased frequency threshold for binges and compensatory behaviour (bulimia nervosa), and a formal recognition of the binge eating disorder diagnosis (American Psychiatric Association, 2013).

Several studies have shown that the DSM-5 criteria led to increased prevalence of eating disorders, especially for bulimia nervosa, and decreased the proportion of EDNOS (Fairburn & Cooper, 2011; Birgegard, Norring, & Clinton, 2012; Machado, Goncalves, & Hoek, 2013; Nakai et al., 2013; Allen et al., 2013). In the debate on the utility of eating disorder diagnostic categories, a key issue is the distinction between the subtypes of eating disorders e.g., anorexia nervosa restrictive subtype, anorexia binge/purge, bulimia nervosa, and binge eating disorders. According to a review by Christine Peat et al. (2009), the data supported the predictive validity of the subtypes and suggested that binge/purge or bulimic subgroups of patients with anorexia nervosa differed in significant ways from patients with restricted forms of anorexia nervosa (Peat et al., 2009). In taxometric studies, which provide empirical means of determining which psychiatric disorders are typologically distinct from normal behavioural functioning, Williamson et al. (2002) found that anorexia nervosa binge/purge apparently occur on a continuum with normality, that the anorexia nervosa restrictive subtype was qualitatively different from the anorexia nervosa binge/purge subtype, and that the anorexia nervosa binge/purge subtype showed evidence of continuity with bulimia nervosa (Williamson et al., 2002). In a longitudinal study of female twins, a latent class analysis (i.e., a statistical model that relates a set of observed multivariate variables to a set of latent variables) placed bulimia nervosa and anorexia nervosa binge/purge in the same class (Wade et al., 2006). However, it was also concluded that lifetime weight ranges and the severity of eating disorder symptoms affected clustering more than the type of eating disorder symptoms.

According to Peat et al (2009), research suggests that pharmacotherapy response data are consistent with subtyping. Thus, those with anorexia nervosa binge/purge do not respond to the same treatments to which patients with bulimia nervosa respond (e.g., fluoxetine); however, these study findings are inconclusive. Peat et al (2009) conclude that the amount of crossover is quite large and suggest that there is generally progression from anorexia nervosa restrictive subtype to anorexia nervosa binge/purge and to bulimia nervosa in a sizeable number of patients even though there is a lack of predictive validity for subtypes.

Eating disorder subtypes have an impact on the evidence for the first choice of treatment. Cognitive behavioural therapy, adapted to bulimia nervosa (CBT-BN), is the first choice in the treatment of adults with moderate and severe bulimia nervosa (Agras et al, 2000; Bossert et al, 1989; Fairburn et al, 1986; Fairburn et al, 1991; Garner et al, 1993). Treatments that serves as a first choice treatment for patients with anorexia nervosa should focus on anorexia nervosa core symptoms and may include family-based therapy (FBT), cognitive behavioural therapy, adapted to anorexia nervosa (CBT-AN), and nonspecific/specific supportive clinical management (NSSCM and SSCM), (Hay et al, 2015; Watson & Bulik, 2013). Subtyping logically seems to have potential clinical utility for assessment and treatment planning. Likewise, subtyping may be considered crucial for eating disorder research e.g., the subtyping scheme may facilitate differential treatment research.

For an eating disorder diagnosis to be made, a comprehensive assessment battery is involved. A common diagnostic assessment of eating disorder symptomatology includes a diagnostic semi-structured interview, typically the Eating Disorder Examination (EDE) version 16 (Cooper, Cooper, & Fairburn, 1989; Wilfley, Schwartz, Spurrell, & Fairburn, 2000), which is conducted by trained health professionals. The EDE has good internal consistency, discriminant and concurrent validity and inter-rater reliability (Fairburn et al., 1993; Williamson, Barker, Bertman, & Gleaves, 1995). This interview contributes sufficient knowledge about the onset and development of eating disorder symptomatology. A specific cut-off, typically a cut-off of 3 on a scale ranging between 0-6, on various items assessing the diagnostic criteria is required to make the diagnosis. At the same time, the EDE makes it possible to

distinguish between subtypes of eating disorders. Furthermore, a somatic examination including a collection of clinical observations and patient-reported somatic symptoms (Hebebrand & Bulik, 2011; Mitchell & Crow, 2006), electrocardiogram (ECG) recordings and clinical and paraclinical assessments is typically performed. Finally, a parental interview to collect anamnestic data is often conducted in children and adolescents. Thus, an extensive and complex assessment is required for an eating disorder diagnosis to be made.

A process similar to that used in the field of eating disorders is standard in several other psychiatric diseases, such as affective disorder, anxiety, psychotic disorders, and other disorders, though other assessment tools are applied. The validation process for an assessment instrument is long and often comprises more than one study. The same applies to the revision of diagnoses and the acceptance of new diagnoses. This process is extensive. Thus, the diagnostic process at an individual level, the process of validating diagnosis and assessment tools, and the process of describing and defining a new diagnosis are complex and extensive.

To have meaningful clinical communication, it is crucial to have a method to distinguish between clusters of symptoms in a meaningful way. This method enables clinicians to speak a common language and to distinguish between normality and a disorder. A more precise language for psychiatric diagnoses contains vital information that is necessary for responsible clinical care (Frances, 2016). Kendler and Jablensky (2003) state that “many, though not all, of the diagnostic concepts represented by the categories of disorder listed in contemporary nomenclatures such as DSM-IV and ICD-10 are extremely useful to practicing clinicians, and most clinicians would be hard put to cope without them” (Kendler & Jablensky, 2003). Jablensky (2016) adds that “[...] whether or not the category in question is valid, as they provide information about the likelihood of recovery, relapse, deterioration, and social handicap; they guide treatment decisions, describe symptom profiles, or guide research into the aetiology of the syndrome” (Jablensky, 2016). Diagnostic classifications satisfy a range of needs, from health data collection to the determination of treatment protocols, public planning, and marketing strategies (Bowker & Star, 1999).

Why diagnosis?

Psychiatric diseases are often, although not always, less visible compared with many somatic disorders. Thus, confirming the presence of the disease is less “clear cut”. The reduced level of separate natural boundaries in most mental disorders and the generally low validity of psychiatric diagnostic criteria, as discussed above, are likely central reasons why psychiatric diagnostics are frequently targeted in repeated discussions. Nevertheless, many patients with psychiatric illnesses suffer tremendously and are in great need of assistance. To treat and/or alleviate psychiatric disorders, knowledge of the conditions in question is central. To treat a psychiatric disorder, it is necessary to obtain sufficient knowledge about various aspects and characteristics of the disorder and the evidence for treatment. The evidence for the treatment of various psychiatric disorders varies significantly. It is thus far from all treatment approaches, whether pharmacological or psychotherapeutic, that has the same effect in the treatment of different psychiatric disorders.

In an article from 2014, Nick Craddock and Laurence Mynors-Wallis wrote, “When used well, diagnosis is a key to assisting patients in making informed decisions about their care. It can ensure a patient gets effective help as quickly as possible and can benefit from the body of knowledge that has been built up from those who have had similar experiences previously. Most people who seek help from mental health professionals want these benefits. When a patient consults a psychiatrist they have a right to expect an expert diagnostic assessment and the psychiatrist has a professional responsibility to provide such an assessment and use it to guide available evidence-based treatments” (Craddock & Mynors-Wallis, 2014). Craddock & Mynors-Wallis refer to the Royal College of Psychiatrists and their *Good Psychiatric Practice*. Within *Good Psychiatric Practice*, diagnosis is mentioned on several occasions, and the text provides clarity about the necessity to use diagnosis effectively as a tool for communication and decision-making; “Good psychiatric practice involves providing the best level of clinical care that is commensurate with training, experience and the resources available. It involves the ability to formulate a diagnosis and management plan based on often complex evidence from a variety of sources. [...] In making the diagnosis and differential diagnosis, a psychiatrist should use a widely accepted diagnostic system” (Roy-

al College of Psychiatrists, 2009). A diagnosis is not an issue of personal choice for a practitioner but a professional responsibility to the patient (Craddock & Mynors-Wallis, 2014). In their article, Craddock & Mynors-Wallis (2014) frame some key elements related to the importance of diagnostics. Well-executed diagnostic work is a way to ensure a standard assessment and treatment based on the best knowledge available at the time.

Alternative approaches, such as *the sociology of diagnosis* from the scientific field of sociology, for example, have challenged the understanding of mental suffering with a fundamental critique of the categorical diagnostic approach. The debate around the sociology of diagnosis first began in the 1970s. Then, Mildred Blaxter called upon sociologists to pay attention to medical diagnosis, both as a category and as a process. Approximately a decade later, in 1990, Phil Brown defined the sociology of diagnosis and wrote "Diagnosis is integral to the theory and practice of psychiatry, yet it is loosely studied by social scientists. [...] Because psychiatry cannot comprehend diagnosis as a socio-political phenomenon, alterations to the existing traditional diagnosis models will not lead to a greater understanding of mental disorder. For that reason, a sociology of diagnosis should be further developed in order to offer a more comprehensive perspective" (Brown, 1990). Brown et al. (2011) define the aim of social diagnosis as follows: "Analyzing the process and factors that contribute to making a diagnosis amidst uncertainty and contestation, as well as the diagnostic encounter itself, are topics rich for sociological investigation" (Brown, Lyson & Jenkins, 2011). Within sociology, as well as the field of psychology, research on diagnosis has attained considerable influence in the past decades. According to Annemarie Jutel (2009), diagnosis is integral to medicine and the creation of social order. Diagnosis organizes illness by identifying treatment options, predicting outcomes, and providing an explanatory framework. Diagnosis also serves an administrative purpose as it enables access to services and status, from insurance reimbursements to restricted-access medications, sick leave and support group membership, among others (Jutel, 2009, p. 278). Approaches such as the sociological approach (e.g., the sociology of diagnosis) as well as those from disciplines within the humanities that challenge the understanding of categorical diagnoses may offer relevant perspectives. In my opinion, howev-

er, the alternative approaches often miss important aspects, such as the extreme pain, debilitating suffering and life-threatening consequences of a psychiatric illness including decreased hippocampal volume, increase risk of dementia and cognitive deficits in depression, and significantly elevated mortality, cognitive insufficiencies, and decreased bone density in eating disorders (Arcelus et al, 2011; Austin et al, 2001; Bachrach et al, 1990; Byers & Yaffe, 2011; Kjærdsdam Telléus et al, 2014; Sapolsky, 2000; Stockmeier et al, 2004; Tchanturia et al., 2011) - just to highlight a few serious consequences of psychiatric illness. A psychiatric disease is much less visible than many somatic diseases and thus has a tendency to be an easier target for debate. The diagnostic categories are based on extensive research and represent a systematic way of understanding, identifying, and classifying psychiatric symptoms in order to understand and treat severe disorders. Thus, psychiatric diagnoses represent the strongest knowledge we have from research and clinical practice, and the intention of psychiatric diagnoses is to offer physicians, psychologists and other health professionals a common language, understanding, definition, and basis for treatment.

A psychiatric diagnosis is not static. In the future, other ways to classify and define mental disorders may be established. A central problem could lie in the conceptualization of a psychiatric disease as a single dichotomous category (Garety & Freeman, 2013); e.g. genetic research has increasingly concluded that schizophrenia has overlap with other diagnoses, which suggests that it may belong to a spectrum of psychiatric disorders and is likely better represented in a number of dimensions (Garety & Freeman, 2013). Nonetheless, the current diagnostic system embodies the best available and most manageable way to organize diagnostic knowledge at present, and it allows the same conditions to be compared in research and builds the base for assessment and treatment.

Conclusion

Psychiatric diagnostic classifications offer useful operational definitions to help clinicians identify patients with mental disorders. Additionally, psychiatric diagnostic classifications offer relevant clinical features to target during treatment. Diagnostic classification also allows researchers to investigate comparable and well-defined groups of individuals as well as produce study findings that are

generalizable and representative. The validity of psychiatric diagnoses has been challenged due to a generally low validity of the existing diagnostic categories. However, it is important to distinguish between the validity and the utility of psychiatric diagnostic concepts. As demonstrated with the eating disorders example, the procedure behind establishing new diagnoses is substantial, as is the effort to specify and define sub-diagnoses and the overlap between them. Likewise, the process of validating assessment instruments and therapeutic procedures is substantial. Both the process of establishing new diagnoses, of defining sub-diagnoses, and the process of validating assessment instruments are based on research. The procedure of establishing a correct diagnosis in a patient is a time-consuming process and not achieved with a brief, self-rating scale. Thus, the reality of psychiatric clinical practice is far from the statement that it is a simple process to establish new psychiatric diagnoses and that they are easy to obtain. The aim of this article was to focus on the utility of psychiatric diagnosis. Although the validity of most contemporary psychiatric diagnoses is generally low and characterized by a low degree of natural boundaries, it does not mean that most psychiatric diagnoses are not useful concepts. In fact, many psychiatric diagnoses are invaluable and useful in clinical practice for patients and clinicians as well as in research.

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