ISSN 2616-7433 Vol. 5, Issue 15: 35-41, DOI: 10.25236/FSST.2023.051507

The Categorical and Dimensional Approaches of Anxiety Disorders: A Discussion of Discrete Entities with Overlapping Features

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Abstract: *There has been a long debate about whether mental disorders should be classified in the categorical or dimensional approaches. This article aims to provide a new perspective on the different classification approaches of one common mental health disorder — anxiety disorder. The essay reflects on both empirical evidence and theoretical models that discuss reliability, utility, and validity as well as various classical treatments of the different classification models. More specifically, this essay analyses several sorts of commonly used psychological models like cognitive models, emotion dysregulation models, and clinical staging models to discuss whether there are discrete entities with overlapping features of anxiety disorder. The results reflect that the categorical approach is sometimes untenable in clinical treatment due to drawbacks like time limitation, lack of experience, and less knowledge of the cut-off points. Moreover, this article suggested that although anxiety disorders are somewhat discrete when doing clinical diagnoses, they share overlapping features and characteristics with other disorders and other anxiety disorders. In conclusion, a more advanced and well-established system is needed to characterize mental disorders such as anxiety disorders in the future.*

Keywords: *Anxiety disorders, Categorical approach, Dimensional approach*

1. Introduction

In some current classification and diagnostic manuals of mental disorders, mental disorders are categorically classified and divided into different types according to the defined criteria and features, although mental disorders are not assumed to be substantially independent clinical diagnoses.[1] Despite the fact that mental health professionals usually interpret and diagnose mental health issues in a way that would qualitatively distinct one disorder from normal functioning or another in clinical settings, there has always been an argument about whether every type of mental illness is a distinct entity with rigid bounds or all of them are differentiated based on functional aspects.[2]

As a major approach to classification, the above-mentioned categorical classification sets criteria for various types of mental disorders and categorizes different symptoms into those criteria and features.[3] It emphasizes the existence of the mental illness as well as its boundary from normal functioning — whether the patient has a disorder or not.[4] Categorical models also demonstrate advantages in clinical practices, where communication between patients and doctors is likely enhanced and more effective.[5]

However, many limitations were found and proved by researchers, which show that many categorical disorders like bipolar disorders, anxiety disorders, and major depressive disorder(MDD) can be merged together and further into normality.[6] Hence, there is no apparent evidence could define the boundary among those disorders. Therefore, some suggested that mental disorders like anxiety should be described and defined in a dimensional approach given the comorbidity with other mental disorders.

The advantages of a dimensional approach to diagnostic classification are widely documented. Dimensional models reflect the course of the disorder, which underlies different mechanisms. Other advantages include the ability to account for, at least to some degree, the main issues related to some unreliability in the DSM, for example hardly can it represent the condition of a certain disorder and the synonym caused by other disorders (e.g. general anxiety disorder and MDD).[7] Additionally, since those dimensional assessments would be used in existing diagnostic techniques, the approach may serve as a preexisting research set as the fundamental support and demonstrate the ability to retain

ISSN 2616-7433 Vol. 5, Issue 15: 35-41, DOI: 10.25236/FSST.2023.051507

temporal and functional analysis that a purely categorical approach can hardly grasp.[8]

As evidence has accumulated that there are many shortcomings of the categorical approach in analyzing a threshold on the severity, number, or time lasted of symptoms, it is crucial to classify different dimensions of the mental disorders in a more quantitative and clarified way.[9] Whereas some also pointed out that if dimensional ratings were simply added into the current criteria, the current unreliability issue could not be effectively solved. Therefore, an appropriate approach to diagnostic classification requires further examination. The current essay aims to provide insights into the classification approach related to one common mental health disorder – anxiety disorders, by reviewing and analyzing both empirical literature and theoretical models that discuss reliability, utility, and validity as well as different typical treatments related to the different classification models. Based on the review of existing literature, this essay suggests that although anxiety disorders are somewhat discrete when doing clinical diagnoses, they share overlapping features and characteristics with other disorders and other anxiety disorders and are thus not best characterized as categorical disorders.

2. The analysis of Utility, reliability, and validity

Utility, reliability, and validity ascertain the theoretical use and practical function of any diagnostic view.

2.1. Validity

The main reason for anxiety disorders to be characterized as categorical disorders is around the validity of the categorical model.[10] Researchers have at times tested the validity of categorical and dimensional models of classification. Researchers have at times tested the validity of both two methods of classification. Though the results of the research mostly demonstrated that the categorical classification is more consistent in determining the existence of the anxiety disorder[11-12], the bodies of those research are more consistent in a dimensional way.[13-14]

Kendell and Jablensky (2003) stated that in diagnostic categories if what's defined as a syndrome, it is compulsory to prove whether it is an entity separating from other disorders.[15] Nevertheless, research indicated that there is a high rate of comorbidity between General Anxiety Disorder (GAD) and other types of mental disorders (over 80%), as well as low reliability.[16] This result was also found in another study where 47% of examined GAD cases were coupled with other mood disorder diagnoses, which is in line with previous research showing that the boundary problems of mood disorders have caused a large number of difficulties in the accurate diagnosis of GAD.[17] Hence, the discriminant validity may not suffice the consideration of GAD as a diagnostic category.

Moreover, there are many debates around the boundary between GAD and other types of anxiety disorders as well. Some of the characteristics of GAD demonstrate a poor correlation between gender and social anxiety.[18] In this case, the concurrent validity may be weakened by limited samples when categorically separating GAD patients and those who have different sorts of anxiety disorders.

Compared with the categorical model, a dimensional liability structure is more suitable for analyzing gender and lifetime diagnoses. This structure could also predict future internalizing pathology such as suicide or angina.[19] In summary, given the high comorbidity within the categorical approach, it is more likely that anxiety disorders share some features and characteristics with other mood disorders and/or different types of anxiety disorders.

2.2. Reliability

Reliability represents the consistency of a measure and whether it is trustworthy in an experiment. Current diagnostic reliability studies of the DSM have shown that the endeavor of defining the specific phenomenon comprising mood disorders and anxiety has succeeded, as evidenced by the current research showing that most anxiety disorders are associated with mood disorders with a high level of reliability.

According to Brown (2001), there are some limitations to the categorical classification at the moment. For instance, patients present different information (e.g., severity or duration) to interviewers at different times, which would lower the test-retest reliability. As a result, the diagnosis of anxiety disorders is sometimes not stable due to the categorical model used, because it is based on patients' self-report and interviews' subjectiveness. In other words, the disagreements in diagnoses were mainly

ISSN 2616-7433 Vol. 5, Issue 15: 35-41, DOI: 10.25236/FSST.2023.051507

because of problems in analyzing the categorical threshold. Another research also indicated the reliability improved from middle to high (kappa = +.60 to +.90) for GAD, social phobia, panic, agoraphobia, etc., and the reliability of anxiety disorders is not high enough to support accurate diagnoses.[20] Different clinicians sometimes may also make different diagnoses because of the highly overlapping features among anxiety and other mental disorders. Gordon and Heimberg (2011) tested the reliability of GAD features by analyzing 129 patients with GAD diagnosis previously. They used the estimates of intraclass correlations (ICCs) and found that excessive and uncontrolled worry have a good inter-rater agreement. There was a bad management of pressure because of worry (ICC = .30). However, there was a trend from bad to good agreement in associated clinical appearances (range of ICCs = .22 to .65) and changed with symptoms accordingly (i.e., strength of body, sleep quality, and focusing ability).[21] Hence, interviewers may come up with a wrong conclusion based on these symptoms due to the high comorbidity.

The fairly large overlap between anxiety and other disorders has a detrimental effect on reliability. We should continue to conduct dimensional assessments to address high comorbidity, boundary issues, the severity of the disorders, and the loss of valuable clinical information.[22]

2.3. Utility

Utility is a clinical term that determines whether a diagnostic test is useful or not while improving beneficial health outcomes.[23] Utility considers the patient's illness as well as the implementation efficiency, duration, cost of treatment, resources, and allocations.[24] From an individual perspective, treatment efficacy seems to be the most crucial concern. As mentioned, categorical diagnoses sometimes could enhance the communication between patients and interviewers, however, the DSM-based model does not offer adequate coverage over some symptoms, which leads to the possibility that the preexisting criteria may not be met.[25] Moreover, categorical diagnoses may cause stigmatization for individuals.[26] The consequences involve ignorance, hostility, prejudice, and violence against those with mental disorders.

From a social perspective, as DSM does not account for individual variations in symptom severity, a possible false treatment resulting from this could lead to the unnecessary distribution of social resources. In addition, utility is a graded characteristic that is partly context-specific, which means certain mental disorders would be invaluable in a particular area. However, a categorical approach (which is based on a preexisting foundation) may ignore the importance of a specific and new type of disorder and simply induct it into a known one. Therefore, many people think the current diagnostic categories could not improve the utility of treatment.[27]

Even if some studies suggested that dimensional representations may make it harder to store the record of prevented diagnoses and bring more difficulties in the clinical system between mental disorders and actual cases[28], it is necessary to be mindful enough of every possible specific disorder and consider a dimensional model. An undeniable benefit of dimensional models appears to be the ability to provide alternative cut-off points according to a more meaningful functional perspective in different social and clinical contexts. This flexibility further enables the conversion from the dimensional model to the categorical classification.

As can be seen in the above-mentioned evidence, the categorical approach appears to be too extreme in determining a certain type of disorder such as anxiety disorder. The high comorbidity results in the overlapping across different types of mental disorders, which may further cause mistakes in diagnoses.

3. Treatment approaches to anxiety disorders

Psychologists use various kinds of models in order to treat different patients effectively (i.e., Cognitive models, Emotion Dysregulation models, clinical staging models). Those treatments are somehow effective for a particular disorder but not for comorbidity between mood disorders and anxiety disorders. Similar treatments may not be used across different disorders, and neither could they target some underlying trans-diagnostic mechanisms.

3.1. Cognitive models

A large number of researches have proved the effectiveness of cognitive-behavioral therapy (CBT)

ISSN 2616-7433 Vol. 5, Issue 15: 35-41, DOI: 10.25236/FSST.2023.051507

for anxiety disorders.[29] CBT demonstrates significant value in the treatment of panic disorder[30], social phobia, GAD[31], and other types of mental disorders. However, the use of CBT never benefits all the patients with those mental disorders[32], partially due to its disadvantages including time-consuming, high cost, and inefficiency in disseminating some specific disorders.[33] In addition, it is found that there might be other elements like negative affectivity (NA), which subsumes lower-order risk factors (i.e., fear, sadness, anger) and results in more specific risks for certain disorders like GAD, panic disorder, and OCD.[34] Watson (2005) advised that both normal symptoms and some specific ones in certain conditions should be included in the model of anxiety disorders.[35] In conclusion, maladaptive cognition is involved in both mood disorders and different kinds of anxiety disorders, which hardly to be comprehensively described by the categorical approach.

3.2. Models of emotion--- Emotion Dysregulation Model (EDM)

Considering the similarity of anxiety disorders and mood disorders, researchers developed several models of emotion as a treatment to distinguish them. The study stated that emotion regulation like intensity, expression, and experiencing emotions act significantly in defining the phenomenon of anxiety and mood disorder.[36] EDM model assumes that the major cause of mood and anxiety disorders is a negative imbalance, and it is associated with a lack of positive effects. Accordingly, there are some effective ways to solve this. Specifically, it is useful to promote adaptive emotion regulation, to reduce negative attitudes, and to promote a positive lifestyle.[37] There are 39 studies with 1140 patients in total that are helped and they used to interfere with several kinds of anxiety disorders. These researchers used mindfulness-based therapies (MBT) under the EDM model for clinical appearances of anxiety and mood disorders.[38] The results proved that the MBT indeed helps in reducing anxiety disorder (Hedges'g = 0.63). For patients with anxiety, the effect size of this intervention was calculated as (Hedges' g= 0.97) in terms of reducing anxiety symptoms. This result also appealed that MBT is a useful interference to cure anxiety in a clinical way. However, as the underlying mechanism is based on different emotions, it is uncertain if patients with other disorders who also experienced the same kind of emotions, or anxiety patients experiencing different emotions, would benefit from the treatment model. The categorical approach could not demonstrate the overlapping nature of anxiety and mood disorder mechanisms properly when applying EDM treatment.

3.3. Clinical Staging Model (CSM)

Different from other models, CSM is a paradigm to identify different stages in the disorder progression. As anxiety disorders are classified according to a very heterogeneous trajectory[39], CSM would be particularly useful to prevent anxiety disorder from getting worse.[40] When considering individual needs in CSM, information on course prediction and prognosis is essential to tailor the treatment. However, categorical classification in DSM does not provide such information and a classification approach that can contribute to the prediction of anxiety disorders is beneficial for the clinical treatments using CSM.[41-42]

As previously said, stages could be distinguished by CSM to indicate increasing levels of severity for a certain disorder.

A detailed study showed that gender, age, and education level were all possible factors that affect the appearance of anxiety disorders and relevant manifested symptoms.[43] A categorical model is unable to capture the differentiation of symptoms across different stages. That being said, in order to consider sub-threshold levels in CSM for early interventions, we need to check symptoms from a dimensional perspective rather than a categorical perspective.[44-49]

4. Conclusion

Currently, the criticism of the categorical diagnostic systems reflects some disadvantages, including the time limitation, less knowledge about the cutoff points of symptoms, and a lack of experience for the diagnostic formulation. Unfortunately, the problems mentioned above have become more obvious in clinical diagnosis. For example, various complicated disorders presented with seemingly the same but subtle different symptoms have proved that the categorical approach is not sustainable. Nowadays, clinical psychologists use the DSM diagnostic system less to achieve an expected intention in clinical treatment as it often results in a biased diagnose due to the insufficient information obtained from the categorical model in DSM. There are indeed numerous ways of approaching diagnostic systems to help

ISSN 2616-7433 Vol. 5, Issue 15: 35-41, DOI: 10.25236/FSST.2023.051507

characterize anxiety disorders, such as machine learning and network analyses. However, it seems that none of them could successfully encompass all symptoms and comorbid conditions of anxiety disorders. In the future, a more advanced and well-established system is needed to characterize mental disorders such as anxiety disorders. In conclusion, the current essay believes that although anxiety disorders are somewhat discrete when doing clinical diagnoses, they share overlapping features and characteristics with other disorders and other anxiety disorders.

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