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Categorical vs. Dimensional Models of Mental Health Assessment

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CATEGORICAL VS. DIMENSIONAL MODELS OF MENTAL HEALTH ASSESSMENT

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Introduction

There has been an ongoing dispute regarding how to approach the classification of mental illness in the fields of clinical psychology and psychiatry, with no signs of resolution in the imminent future (Kraemer, Noda, & O'Hara 2002). The categorical model is based on yes/no decisions on whether a person does or does not have a mental illness. On the other hand, the dimensional approach where each person receives a score on a continuous scale of psychological distress with no cut-point to designate a threshold between those with and without a presumed illness rather than simply determining whether or not an illness exists (Kessler, 2002).

The model that is currently in place is the categorical model and its use has been widespread since 1980 when the DSM-III was published and used internationally for categorical assessment (Mayes & Horwitz, 2005). It has since been widely utilized by professionals, but is not without flaws. Based on the argument for an alternative approach, researchers have argued several limitations of the categorical model: that no true discrete mental illness can be reasonably operationalized by categorical measures; that negative stigmas can accompany a diagnosis of mental illness; that there is inherent uncertainty when making diagnoses, whether to perceive certain information as a symptom or an illness (Kessler, 2002; Kraemer et. al, 2002; Millon, 1991). Further, the categorical approach to diagnosis involves symptom cutoffs that are arbitrary, and the diagnosis of disorders is unreliable (Kessler, 2002; Millon, 1991; Trull, 2005). With this in mind, there is a movement (1991) for either the implementation of the dimensional model or a push for the combination of the two forms of assessment depending on individual needs of the client. With this uncertainty present, this research examined what model practicing clinicians prefer and possible future directions based on their responses.

Literature Review

It is important to look at the history of each diagnostic approach, in order to examine the course of events that lead to the widespread use of one model over the other. Emil Kraepelin is considered the founder of modern systems of psychiatric diagnosis and classification. He believed the chief origins of psychopathology to be biological and genetic in function, and provided what he called a clinical approach to classification by grouping diseases together based on classification of syndromes, or common patterns of symptoms (Trull, 2005). Kraepelin began using diagnostic constructs as a means toward a full scientific exploration of mental illness after his work, *Compendium der Psychiatrie*, was published in 1883. He also started the first major psychiatric research facility in Germany in 1917, and the research consisted of clinical studies, pathology, genetics, and experimental psychology to focus on psychiatric diagnosis. His textbook also includes information that provided a detailed description of mental states and abnormal behavior, while also using longitudinal research to define the course and outcome of several psychiatric disorders (Jablensky, 2008).

History of Diagnostic Models

Kraepelin's idea of classification of mental illness was further utilized by the International Statistical Classification of Diseases, Injuries, and Causes of Death; in 1948, this system first included classifications of abnormal behavior. Shortly after this, the first Diagnostic and Statistical Manual of Mental Disorders (DSM) was published in 1952 (APA, 1952). The DSM evolved from collecting census and psychiatric hospital statistics to create the 106 mental disorders listed. Each revision of the DSM since has included more mental disorders, while also removing some along the way (Trull, 2005). The third revision of the DSM (DSM-III)

revolutionized the classification of mental illness, by adding explicit diagnostic criteria for mental disorders, a multiaxial system of diagnosis, a more empirical approach to causes of the disorders or etiology, and a greater emphasis on clinical utility of the diagnostic system. These additions remained in later editions of the DSM (DSM-IV and DSM- IV-TR), and are the basis for the categorical model used today (Kraemer, Noda & O'Hara, 2002; Trull 2005).

In contrast, the earliest dimensional scales were used after the first DSM was published and the categorical approach was already well-established in psychiatry. The first two popularized dimensional scales were the 20-item Health Opinion Survey in 1957 and the 22-item Langner Scale used in 1962. These early scales were used to target respondents with broadly defined emotional problems and determined whether or not they needed more in-depth clinical assessment. The comparison between screening scores led to the establishment of optimal cut-offs on the screening scales for differentiating "cases" from "noncases" (Kessler, 2002). There are now additional scales that assess symptom severity and treatment effectiveness that are respected and utilized by clinicians (Goldberg, 1972; Rush, et al. 1996). Examples of such scales are the Marks Fear Questionnaire (Marks & Matthews, 1979) and the Liebowitz Social Anxiety Scale (Liebowitz, 1987). At this point, these scales are only used after first determining that the patient does meet criteria for a phobia, determined by an initial clinical interview (Kessler, 2002). It is based on successful scales such as these that there has been a push by researchers to abandon the current categorical system and move toward a symptom severity assessment.

Strengths and Challenges of Diagnostic Models

The categorical model is based on current behavior exhibited by clients or patients; this is determined by observation and/or lab results (Millon, 1991). Specific symptoms are identified through criteria listed in the DSM-IV-TR. The use of the DSM allows for universal guidelines, which, along with the use of structured interviews, add validity to the categorical model. Once the symptoms are understood, the clinician can identify them with a known disorder and can predict other symptoms that may occur and the course that the illness may take in the future (Mayes & Horwitz, 2005).

Generating a diagnosis through the use of categorical approach can serve four important functions (Trull, 2005). First, the primary function of a diagnosis is ease of communication. A diagnosis allows a lot of information about a patient to be conveyed in a single term. Second, a diagnosis also enables and promotes empirical research on psychopathology. If researchers and clinicians share a definition of a particular kind of psychopathology (e.g., depression), then they can better integrate their research on that pathology. This also allows research to be conducted regarding psychological test performance, personality features, and comorbidity or co-occurrence between disorders. Another advantage to a diagnostic system is that research into etiology would be almost impossible without classification systems. It would be very difficult to test possible causes for certain mental disorders if there is no standardized diagnostic system to begin with. An example of this would be that studies show that sexual abuse may predispose individuals to Borderline Personality Disorder, an important finding that may not exist without explicit classifications. The final benefit of a diagnosis is to suggest which mode of treatment is most likely to be effective. This is important in the respect that once a diagnosis is agreed upon, there will likely be an immediate form of treatment that best suits the diagnosis, for instance antipsychotic medication instead of psychotherapy for someone with schizophrenia. Categorical

approaches are argued to be essential to survival because it allows professionals to make important distinctions such as a mild cold compared to viral pneumonia, or in the mental health field a clear difference is found between such terms as Bipolar Disorder and Schizophrenia (Trull, 2005).

Even though there are several advantages to the current categorical model, there are some definite challenges to its use as well. The flaws of this approach tend to favor support of a dimensional approach to diagnosis. First, those supporting a dimensional approach argue that mental illness cannot be solely defined by categorical measures. This is to say that since there are so many symptoms that overlap into other disorders, it is impossible to limit symptoms to one distinct disorder while ruling out other possibilities (Kessler, 2002). Second, diagnosis of a specific mental illness can be quite stigmatizing. The society associates a mental health diagnosis with dangerousness which leads to social rejection (Martinez, Mendoza-Denton, & Hinshaw, 2011), with a lasting effect if a diagnosis is given to a child or adolescent (Cantwell, 1996). Another downside of a categorical approach would be whether collected information should be perceived as a symptom or a diagnosis. This was shown by Millon (1991) when he noted that it is still uncertain whether depression is a separate category or an attribute to another disorder. Another common argument presented is the use of arbitrary cutoffs to determine whether or not symptoms are present. This is a large part of the argument for alternative measures. Many people question what determines the cut-offs that decide whether or not a person has a symptom and suggest that a scale is better to determine how severe a symptom is instead of whether it is present (Millon, 1991; Kraemer et. al, 2002). Finally, there is evidence to suggest that the current categorical diagnostic system is not very reliable. A study reported by

Trull (2005) had two clinicians interview the same 153 clients; troublingly, they only agreed on diagnosis 54% of the time (Beck, Ward, Mendelson, Mock, & Erbaugh, 1962).

These challenges to the categorical system for diagnosis potentially lend support to an alternative, more dimensional model of conceptualizing mental illness. One advantage is that, with the recent development of structured diagnostic interviews, an assessment can take as little time as 10-30 minutes. Further, a clinician would also be able to examine the severity of symptoms rather than simply determining whether or not a symptom is present (Kessler, 2002). Kessler (2002) also suggested that treatment can easily be determined based on dimensional measures by observing whether or not the symptoms are mild, moderate, or severe and translating this information into an appropriate form of treatment. He compared this to how severe a case of asthma may be and how that would correspond with the recommended dosage and how often the treatment should be used. Additionally, Kessler (2002) stated that it would be easier to determine whether medications may be necessary or even hospitalization depending on how elevated a score might be on a given scale. Another important advantage of using a sliding scale is that it eliminates the need for arbitrary cutoffs (Millon, 1991; Trull, 2005). For example, generalized anxiety disorder is based solely on how prevalent anxiety is within an individual. If a clinician was using a traditional (categorical) approach, they would have to rely simply on whether the individual had anxiety instead of determining if the anxiety symptoms were severe enough to qualify for generalized anxiety disorder. Focusing on symptoms rather than emphasizing diagnosis may be more reliable and allow for more parsimony in the diagnostic system (Mayes & Horwitz, 2005). Additionally, by removing arbitrary cutoffs and resulting diagnoses, some of the negative stigmas associated with mental illness would be alleviated because there would be no diagnosis to begin with (Martinez, 2011).

Using a completely different approach would also come with its own unique downsides; further, some of the strengths of the categorical approach would disappear with the use of a new system. For example, the categorical approach to diagnosis allows for ease of communication among clinicians, and it also allows for the advancement of treatment on particular disorders. If focusing just on the severity of symptoms rather than diagnostics, a clinician would have to make individual, symptom-specific decisions about severity each time instead of being able to predict and generalize with a simple term (the diagnosis) that would be useful categorically. Another flaw would be many of the research advantages that would disappear with the use of dimensional assessment. For example, research into age of onset, comorbidity of disorders, as well as investigations into the etiology of various disorders would be lost because the emphasis would be placed on symptoms instead of the disorders themselves (Trull, 2005). Another proposed flaw in the dimensional model is that it could potentially limit assessment of symptoms to recent time intervals, such as the past week or month; whereas categorical approaches make it possible to examine the symptoms over a long period of time (Millon, 1991). Millon argued that the categorical diagnostic approach may be unavoidable in clinical psychology. Based on humankind's linguistic and attributional habits, there is a need to differentiate and to record the most obvious dissimilarities among the psychologically impaired.

Purpose of Current Research

Although the above-noted concerns with the categorical approach have been presented by *researchers,* it is unknown how practicing *clinicians* view this existent model. With a variety of differing opinions about the best course of action with regards to clinical approaches (Kraemer, Noda, & O'Hara, 2002; Millon, 1991), the question needs to be asked to determine what best suits professionals working in the field. To do this, I created an online survey was created to

give to various practicing psychologists and psychiatrists to provide their opinion on which approach is the most useful in a clinical setting. These are the people in the field that work with the model in question; thus, their experience with and perspectives using the categorical model should be evaluated, in order to identify any flaws present in this model. The survey also asked questions about the potential strengths and weaknesses of transitioning into a more dimensional approach to diagnosis. It is expected that professionals will identify more challenges to using the categorical system than strengths using it.

Methodology

Participants

The participants used in this study are current members of the Iowa Psychological Association (IPA). There are 248 members of the IPA, most of whom are practicing clinicians. A survey was created and sent through the listserv of the IPA with the assistance of Dr. O'Conner, a current IPA member. A goal was set to gather the opinions of thirty licensed practitioners will be collected for this study. The study concluded with responses from 23 clinicians.

Instruments

To determine the opinion of practicing clinicians an online survey was utilized. The survey asks various questions regarding the current categorical model and its utility, while comparing the advantages and disadvantages of using an alternative, more dimensional model of assessment. The survey consisted of eleven open-ended questions and the full survey can be found in Appendix A. These questions have been created to examine which model best suits mental health assessment in a clinical setting based on answers provided by practicing clinicians.

After receiving qualitative data from respondents, their answers were analyzed and coded by the primary investigator to identify the most common responses, as well as finding differences in opinions regarding assessment methods. The commonalities were then gathered to form general conclusions as well as providing some alternatives based on the remaining responses.

Procedure

An online survey was created and sent through the Iowa Psychological Association listserv by Dr. O'Conner, a current member, after receiving IRB approval to do so on March 28, 2013. This project was examined by the university's Institutional Review Board, and guidelines for informed consent and confidentiality were followed. The purpose of this survey was to ask various questions regarding the utility of the categorical system, as well as advantages and potential downsides of using a more dimensional method of assessment. The survey will be completed by a minimum of thirty clinicians and their answers were gathered to determine a collective view. This view was examined to determine if the best approach to mental health assessment is the current model, or if a change or adjustment to the current system would be beneficial to clinicians.

Results

The survey has been completed by 23 Iowa Psychological Association members, and although there was some diversity in responses, some conclusions can be made based on the commonalities between the varying responses. Many of these represent ideas what were hypothesized before the beginning of data collection, stemming from the reviewed literature in this area; further, the general theme of the responses across answered questions were that the current categorical model is not without flaws, but it may still be the best option available.

Clinicians did not deny the idea that a dimensional model would come with its own unique benefits that are not currently present with a categorical approach, but they reported that there would be many downsides, and that a transition away from current training to a different model would be very difficult with it so heavily grounded in the field already. However, many of the respondents are currently able to use a categorical approach while still keeping symptom severity in mind during the assessment process and use the two models in tandem. An unfortunate conclusion of this study is that insurance plays a large role in the diagnostic process, and requires a diagnosis for clinical reimbursement, as well as for receiving services for the client. Without a change in insurance policies, services would become more restrictive and insurance would not pay for clinical visits without first providing a diagnosis. Finally, the last conclusion drawn from this study is that there are other alternatives rather than just a dimensional approach including a needs-based approach mentioned by some clinicians, and clinicians often have different perspectives on what is most effective without having a general consensus for just using one approach. Answers to specific questions are summarized below.

Question 1: How do you incorporate the process of diagnosis in your practice?

Answers to this question reflected a lot of similarity across the surveyed practitioners. These include the fact that initial assessment and a resulting diagnosis is very often the step that initiates the treatment process as well as the expected benefits of a diagnosis in guiding treatment and ease of communication. This is reflected by responses such as, "I determine a diagnosis for each client I see, in order to guide treatment, provide psychoeducation, and seek reimbursement from insurance companies."

Question 2: Currently, the Diagnostic and Statistical Manual uses a categorical approach to diagnosis. This categorical perspective takes an all-or-none approach to diagnosis (i.e., a client either has depression or they do not.) How do you view this model of diagnosis?

The general consensus of responses to this question indicated that the categorical model is effective, but does have flaws. One response that was particularly interesting stated that the categorical perspective is, "flawed but best of all the bad options." Other responses related to the idea that the DSM is limiting which led to three responses showing that some clinicians use the categorical approach, but keep symptom severity in mind while doing so.

Question 3: Do you perceive any benefits to using this categorical approach?

Most of these responses related to the ease of communication, and one such response claims that it is effective, "because it is the current model, everyone is familiar with how it works and can use it to enable communication." It is also mentioned that it is important for reimbursement by means of a diagnosis, and also that a needs based approach may be a preferred option to both the categorical and dimensional model.

Question 4: Have you come upon any challenges or negatives associated with the use of categories (i.e., diagnoses)?

Clinicians identified several challenges with a categorical approach. These include the negative impact of labels, that behavior is complex and a categorical model may oversimplify this, there is a lot of overlap in diagnostic categories which leads to the low level of inter-rater reliability, and there may be particular issues with certain disorders such as Autism spectrum disorders and personality disorders. The most common responses noted flaws, "for clients who are on the line between meeting criteria and not, it can lead to either unnecessary diagnosing, or

inability to diagnose in someone who is distressed and in need of treatment," and brought up that sometimes patients are in need of services, but may not qualify for a diagnosis.

Question 5: One proposed alternative to the categorical approach to diagnosis is using a more dimensional process to evaluating disorders. This dimensional approach is more symptom based and focuses on the severity of individual symptoms. What is your perspective on this approach to diagnosis, given that the categorical system is more common?

This question elicited a variety of responses. Approximately 50% mentioned that a dimensional method or a combination of the two methods in question would be beneficial, while others responded to the difficulties that would accompany a transition as well as a likely resistance from insurance and marketing companies. There were also some, including one in particular, that states that a dimensional approach is, "a step in the right direction but I still believe a support needs assessment would provide more benefit." This shows that there are still other alternatives that may be effective other than the current categorical or even the dimensional approach in question.

Question 6: Do you perceive any benefits to using a dimensional, or symptom-based, approach as a replacement for the categorical approach?

The results showed that approximately 60% agree with statements such as, "We could more accurately characterize a person's unique cluster is symptoms rather than forcing them into a box," that show benefits including a more accurate representation of human psychology, creating a more individualized picture for clients, and helping to avoid negative stigmas associated with a diagnosis. The remaining 40% mentioned that they are more comfortable with the current categorical approach and that a transition in models would not be as beneficial.

Question 7: Do you see any challenges or negatives to using a dimensional, or symptom-based, approach (as opposed to the existing categorical system) in your practice?

The responses to this question provided two important points. The first is that approximately 25% try to incorporate a more dimensional approach already or feel that it could be beneficial in their practice. The remaining responses, such as one stating that "The main challenge is that many of us were heavily trained to use the categorical system, so any switch will be difficult," show that a transition away from the current categorical model would be an issue.

Question 8: Do you see any challenges or negatives to using a dimensional, or symptom-based, approach (as opposed to the existing categorical system) for the field of psychology?

Clinicians identified various issues with a dimensional approach. Responses such as, "Moving away from a more simplified categorical approach may make communications among professionals more difficult," indicate that there would be clear issues with a more dimensional approach. The only benefit mentioned that more clients may be able to receive services if insurance companies changed their policies to better fit a different approach to mental health.

Question 9: In your practice, would you be able to properly assess and treat a client based solely on symptom severity? Why or why not?

This question was nearly split in responses. Over half of the responses included statements such as: "That is essentially what we do anyway, DSM IV has been obsolete for years," that indicate that they already try to incorporate symptom severity into their practice, while others believe that this alone would not be an efficient way to address mental health

concerns. An example of a response that reflects this point of view is, "It might be tough to select interventions, given all the research has used categorical diagnosis."

Question 10: Would the use of a more symptom-based approach to assessing and treating clients with particular mental health concerns allow for greater or more restricted access to services for clients in need? Why or why not?

Responses from this question resulted in a lot of uncertainty based on whether or not insurance companies would adjust their policies to accompany a change in mental health assessment. Some examples, such as, "I imagine it would restrict access if the categorical cut offs were not met although functionally there is a need for particular symptoms to be treated," believe that insurance companies would resist, while other responses such as, "I would expect greater access because we would be able to focus on level of distress rather than whether they meet criteria for a specific diagnosis," provide a more optimistic view regarding access to services.

Question 11: Is it possible to treat a client without a diagnosis?

The final question received similar responses by all clinicians. Examples of such responses include, "Yes. People are multi-faceted and do not always fit into the categories or symptom pictures we come up with. They can have some of one or another, this and that, and be altogether miserable, having trouble parenting, on the job, etc and really not be diagnosable. While you can generally squeeze them into one or another of the NOS categories, you could consider them a client without a clear diagnosis at times." Responses related to this were common, and in general clinicians stated that they would be able to do so and that they all try to

meet the needs of each individual client, while a diagnosis is just one aspect of treatment that is necessary for insurance purposes.

Discussion

Some important information was gathered from this study, and statements can be made regarding the clinical use of each model, as well as the potential direction that mental health assessment may be heading. It does seem to be the case that categorical model currently in place is not without flaws, but clinicians generally feel that this is the most useful model. Additionally, any transition away from this model would be very difficult with the common language and ease of communication that a categorical approach allows. Another important factor that influences the diagnostic model used is the role that insurance companies have. Insurance provides reimbursement to clinicians upon providing a diagnosis, as well as services for those who qualify for a diagnosis. A change to a more dimensional approach would likely be accompanies with resistance by insurance companies and services to those in need may become more restrictive.

This information all leads to a general consensus that although there are noted concerns with the current categorical model, it will remain the primary approach for clinicians. There are other noted alternatives such as the dimensional model and a needs based approach mentioned in some responses, but the categorical system is overall more efficient and more conducive to research and communication between clinicians. However, it is possible to utilize the categorical approach while still taking into account symptom severity, which may be more effective and is already used by some clinicians today.

Some limitations of this study were that only 23 clinicians were able to respond to the study and that two of the responses were provided from retired practitioners. The information

was also limited to members of the Iowa Psychological Association when the diagnostic system in question is used not only throughout the country, but internationally as well. The final possible limitation is that no survey or standardized form of questions exists and one needed to create for the purpose of this research. However, based on the answers provided by the responding IPA members, it does show that there are several people that do not find the DSM to be the most effective diagnostic tool and disagree with some aspects of the current categorical approach. This being said, it was also identified that a purely dimensional approach may not be the best method either. Therefore, a possible solution in the future may be to address some of these issues and address some of these flaws in future editions of the DSM. The DSM is the primary diagnostic instrument for clinicians, and if some of these concerns were reflected in later editions it may make for greater ease of use and clinical agreement.

Appendix A

Question 1: How do you incorporate the process of diagnosis in your practice?

Question 2: Currently, the Diagnostic and Statistical Manual (DSM) uses a categorical approach to diagnosis. This categorical perspective takes an all-or-none approach to diagnosis (i.e. a client either has depression or they do not.) How do you view this model of diagnosis?

Question 3: Do you perceive any benefits to using this categorical approach?

Question 4: Have you come upon any challenges or negatives associated with the use of the categories (i.e., diagnoses)?

Question 5: One proposed alternative to the categorical approach to diagnosis is using a more dimensional process to evaluating disorders. This dimensional approach is more symptom-based, and focuses on the severity of individual symptoms. What is your perspective on this approach to diagnosis, given that the categorical system of diagnosis is more common?

Question 6: Do you perceive any benefits to using a dimensional, or symptom-based, approach as a replacement for the categorical approach?

Question 7: Do you see any challenges or negatives to using a dimensional, or symptom-based, approach (as opposed to the existing categorical system) in your practice?

Question 8: Do you see any challenges or negatives to using a dimensional, or symptom-based, approach (as opposed to the existing categorical system) for the field of psychology?

Question 9: In your practice, would you be able to properly assess and treat a client based solely on symptom severity? Why or why not?

Question 10: Would the use of a more symptom-based approach to assessing and treating clients with particular mental health concerns allow for greater or more restricted access to services for clients in need? Why or why not?

Question 11: Is it possible to treat a client without a diagnosis? Why or why not?

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