Undergraduate Thesis Prospectus

Data Manipulation: Converting XER Files for Analysis

(technical research project in Computer Science)

The Struggle over DSM-5 in Psychiatry

(sociotechnical research project)

by

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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General research problem

How is mental health best promoted?

Just like physical health, mental health is a part of everyone's life. Culture, society, workplace environment, and personal interactions all affect our mental health. However, mental health issues affect many adults, especially in the United States. In 2021, 1 in 5 American adults experienced mental illness, and 1 in 20 adults experienced serious mental illness (NAMI, n.d.). Poor mental health plays a role in suicides, substance abuse, homelessness, and risk of developing cardiovascular and metabolic diseases. Promoting mental health will benefit individuals and society.

Data Manipulation: Converting XER Files for Analysis

How can the team best create a system for extracting and presenting large construction scheduling data for another internal team that fosters mutual support, collaboration, and collective success that promotes both employees' and the enterprise's material interests?

Scheduling data is necessary for settling legal disputes when large construction projects are delayed. The project's goal is to present data from proprietary .XER files for legal experts' use. This project is an alternative to employees having to manually extract data from the scheduling software. This work was conducted for Kroll Inc. and the paper is written in the Computer Science department under technical advisor Prof. Briana Morrison.

The Struggle over DSM-5 in Psychiatry

How are supporters and critics of DSM-5 advancing their agendas?

How can mental health be promoted without correct, meaningful, agreed upon definitions of what counts as mental illness? The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5) was published in 2013. This book is regarded as an "authoritative volume that defines and classifies mental disorders to improve diagnoses, treatment, and research" (APA, n.d.). This statement implies that the DSM will affect clinicians and researchers, but many more groups will be involved. These groups include patients, insurance companies, pharmaceutical companies, lawyers, and the public (Singh & Armstrong, 2015). Catering to parties is a difficult task, so the DSM-5 sparked immediate controversy over its motives, implications, and applications. DSM-5 is the leading classification and diagnostic manual, but its validity is in question.

There are two main types of critics of the DSM-5: practical and theoretical. The practical groups criticize the economic motives, inclusivity, and applications of the manual. The theoretical groups criticize the theory which allows the DSM to classify and the research that follows. While practical critics want to improve the DSM and apply it better, theoretical critics want to part from it. Both views are important because the role filled by the DSM cannot be void.

Practical critics contend that pharmaceutical companies' material interests influence decisions in the DSM. Cosgrove and Krimsky (2012) reported that over 69% of DSM-5 task force members had ties to pharmaceutical companies. Influencing the treatment guidelines for mental illness would help pharmaceutical companies sell more product. This raises concerns about the impartiality of the DSM-5. In defense David Kupfer, the head of the DSM-5 planning committee, says strict rules are in place that force members to annual income of less $100,000

from industry and limit shares in pharmaceutical companies to less than $50,000 (Gornall, 2013). These are "more stringent than requirements for staff at the National Institutes of Health, members of advisory committees for the Food and Drug Administration, and most academic departments" according to Kupfer. Researchers are still pressing for a stricter policy. Cosgrove and Krimsky (2012) are demanding that DSM task members have zero financial conflicts of interests (FCOIs), have never spoken on behalf of pharmaceutical companies, and if an expert with FCOIs is required they can only consult DSM panels. Gary Greenberg, a psychotherapist in Connecticut, argues even further about pharmaceutical ties in psychiatry. He argues that there is no conspiracy. He says that DSM is created by committees "made up of experts in the field, who tend to be people who are valued and pursued by drug companies to do their research." This means pharmaceutical companies don't directly influence DSM panel members, but they create "an entire profession that intellectually is already predisposed to seeing mental problems as problems that should be treated with drugs" (Gornall, 2013).

Others are concerned with the motives of individual DSM committee members. The APA required members to sign confidentiality agreements to protect revenue, and this damaged transparency and accepted methods of peer review within the DSM (Pearce, 2014). Confidentiality in conjunction with the DSM's classification strategy gives board members more power. The DSM uses a strategy where clusters of symptoms are grouped and named. This leads to theoretical criticism that will be discussed later, but the practical concern is that board members can have "pet" illnesses. Peter Tyrer, a professor of community psychiatry at Imperial College London, explains it as, "A lot of clever people sit around a table and say, 'I've done work on this and I want to have narcissistic personality disorder included,' 'I want to have dissocial personality disorder' 'I want to have avoidant personality disorder'" (Gornall, 2013).

Including new diseases this way is unscientific and deters from the validity of the DSM. Another concern with DSM is that it is a system created by and biased to work for Americans and their specific portrayal of symptoms (Murphy, 2015). The DSM was worked on by primarily US-based clinicians (Pearce, 20114) and they stated societal impact as motivating factors in their decisions for changes in the DSM (Blumenthal-Barby, 2014).

The next practical concern is the adoption and reliance on the DSM-5. The selling point of the DSM is reliable diagnosis. It gives clinicians, students, and patients a sense of certainty in psychiatry. This certainty has led to the widespread adoption of DSM. It is used like a textbook; "many undergraduate psychology students view the DSM-5 as the ultimate authority in diagnosis within the field of mental health" (Bender, Stokes, & Gaspaire, 2018). This future reliance on DSM-5 is where practical concerns meet theoretical concerns. Critics question DSM-5's top-down checklist approach at classification and diagnosis. The categories are based on clusters of symptoms rather than causes of symptoms. This approach places a false certainty in diagnostic decisions that are not based on research (Pearce, 2014). In earlier days, psychiatrists were aware that diagnosis was chaotic and weak, but now with the certainty that the DSM displays the chaos is hidden (Ghaemi, 2018). Practically, there must be a manual to diagnose illness so that insurance can pay, clinicians can diagnose and treat, patients have certainty, and research has a point of reference. Theoretical critics claim the DSM-5's unscientific classification should not be the reference for future nosology and research. H. van Praag, an early critic of DSM, wrote in 1993, "There is nothing wrong in basing the first draft of an operationalized taxonomy on expert opinion … One should abstain, however, from proceeding further on that route" (Ghaemi, 2018). Van Praag understood the connection between practicality and theoretical correctness.

The overmedicalization of patients is a large fear for critics of the DSM. The approach of classifying groups of symptoms is one cause of overmedicalization. Robert Spitzer, chair of the task force that created DSM-III, is now a large critic of the system he helped establish. He told a BBC documentary in 2007, “We made estimates of the prevalence of medical disorders totally descriptively without considering that many of these conditions might be normal reactions which are not really disorders”. The British Psychological Society (2011) wrote a letter voicing concerns that because of the DSM, “The general public are negatively affected by their continued and continuous medicalisation of their natural and normal responses to their experiences.” They concluded that an alternative framework exists and should be pursued, and they closed their letter with, “The Society would be happy to help in such an exercise.”

Other societies are already pushing for different frameworks. The National Institute of Mental Health (NIMH) has ceased funding DSM categorical research and is pushing the Research Domain Criteria (RDoC) (Ghaemi, 2018). This research will begin with brain-based concepts rather than with mental illness definitions. NIMH Director in 2013, Thomas R Insel, wrote that the cause for this change was that, “The DSM diagnoses are based on a consensus about clusters of clinical symptoms, not any objective laboratory measure. In the rest of medicine, this would be equivalent to creating diagnostic systems based on the nature of chest pain or the quality of fever” (Pickersgill, 2014). RDoC is taking a strictly biological root cause approach, the opposite of the DSM’s approach. Researchers still criticize saying, “Both extremes are questionable: the DSM approach is clinical but unscientific; the NIMH approach is scientific but not clinical. The profession still awaits a scientific approach to clinical research on diagnosis” (Ghaemi, 2018). The Hierarchical Taxonomy of Psychopathology (HiTOP) consortium is attempting to bridge the clinical and scientific divide. They are researching and

designing a classification method that places mental health on a spectrum and focuses on identifying traits rather than conditions (Ruggero et al, 2018). HiTOP has a long way to go, but they are attempting to get the funding necessary to rival the DSM.

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