



When Good Measurements Go Bad

A Review of

Measuring Specific Mental Illness Diagnoses with Functional Impairment: Workshop Summary

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Reviewed by

David M. Reiss 

Measuring Specific Mental Illness Diagnoses with Functional Impairment is a very detailed summary of the Workshop on Integrating New Measures of Specific Mental Illness Diagnoses with Functional Impairment into the Substance Abuse and Mental Health Services Administration's (SAMHSA) Data Collection Programs. The workshop was held in Washington, DC, during September 2015. This book provides summaries and discussions of the multiple sessions and presentations that occurred at the Workshop. Much of the writing is, of necessity, rather dry and focused upon specific facts, data, and arguments that arose during the Workshop. I doubt that anyone who does not have a very specific interest in the study of methodologies for measuring and rating functional impairment that occurs as the result of psychopathology would have the motivation to read this book line-by-line, cover-to-cover. For persons in that field, the discourse certainly provides a wealth of information presented in (what I perceive as) an objective and unbiased manner. While reading the book, at no point did I wonder if the authors might have been trying to influence the reader to adopt any particular point of view. Descriptions of different methods of analysis and statistical measurement of impairment and arguments questioning the reliability of those methods are given full and equal voice.

Despite the very technical nature of much of the content, the authors are to be credited for inserting clear, plain-language, and easily-visualizable analogies to help explain some of the more difficult concepts inherent to devising ways to measure what clearly is not a simple, linear system or a direct cause-and-effect chain of events.

In that regard, perhaps what would be most interesting, and indeed important, to the reader who is not devoted to the particular field of study under focus is the clear explication of the difficulty in measuring "outcomes" that certainly are not the result of a linear progression of events and variables. In that regard, I found the book both interesting and educational as well as actually applicable to many other areas in the field of mental health, areas that now fall under the rubric of "Evidence-Based Medicine" (EBM).

Specific to the topic being addressed, there are discussions regarding how attempts to accurately measure impairment and relate impairment to specific diagnoses and disorders is limited by factors such as difficulties in consistency of diagnosis, especially related to psychotic disorders and Axis II pathology; underrepresentation in medical databases of the uninsured, non-citizens, and those incarcerated; difficulty in taking surveys at a time when landline telephones rarely exist and most people rely on cell phones whose “numbers” do not lend themselves to being a source for random sampling or sampling of specific populations, as can occur with home-based landlines (an issue also applicable to political polling); evaluating inter-episode functioning as opposed to measurements more easily available during periods of acute symptomatology and treatment; the problems of co-existing, co-morbid pathologies, both psychological and physiological; changes in “average” levels of impairment associated with specific pathologies due to rapidly-advancing treatment interventions; the movement of persons between treatment systems due to external factors which may bias a database; and the great difficulty in finding reliable, measurable variables related to the level of functioning in the realm of interpersonal interactions.

There is specific discussion of the World Health Organization Disability Assessment Schedule (pp. 24–27) which aims to address “the need for impairment measurement since diagnosis alone fails to predict service needs, length of hospitalization, outcome of hospitalization, receipt of disability benefits or work performance and social integration.” The book addresses the Global Burden of Disease study (pp. 29–27), in which it was discussed that variables related to understanding and measuring a person’s level of mental health disability is much more complex (involving integrating measurement of multiple, inter-dependent behaviors/abilities) than is typical for evaluating physical disability, which may only require measurement of one “outcome” variable: “For physical disorders, such as vision, there are measurable variables (visual acuity). Dementia, mental health multiple variables, involve different measurements. . .” It is further explicated that the very nature and methodology of measurement of the same variables often differs dependent upon the purpose of a study—e.g., epidemiological research, clinical assessment, policy development, etc.

Again reaching beyond the specific goals of research regarding psychiatric impairment, there can be found enlightening discussion of innovative approaches. For example, approaching the issue of how different variables (one example: quality of sleep) can be evaluated in detail when it is significant to a particular subject without burdening other subjects with excessive questioning, a computer-based methodology is described wherein if a certain question generates a positive response, additional and more detailed investigation in that area is triggered to be presented to the subject whereas persons who do not indicate sufficient problems in that area are not asked to respond to the additional queries.

It was my impression and experience that beyond technicalities regarding the area of investigation, even selectively skimming the book would be a worthwhile experience in bringing to mind the more general issue of defining and describing statistical “evidence” in the field of mental health and the limitations and frequent inaccuracies introduced by current methodologies common to EBM.

This certainly is not a new issue but it is often a neglected area of concern in the current mental health system. We can go back to Erwin Singer, who wrote in 1965, “There is little doubt that in an era which has witnessed spectacular advances in technology, men look with hope to a machine-model of man. . .”(p. 107). Such implicit thinking invades and perturbs attempts to measure “impairment” as well as EBM as a whole, a system which also falls

victim to the denial of uncertainty that is inherent to our field. "Because our conception of rationality is grounded in the Mechanistic Paradigm which has no place for uncertainty, we find it difficult to be rational about uncertainty. . . . We are tempted to retreat into a false sense of certainty. . ." (Bursztajn, Feinbloom, Hamm, & Brodsky, 1981, p. 17).

In summary, while the authors of *Measuring Specific Mental Illness Diagnoses with Functional Impairment* may have intended their work to be a reference book for a specific area of study, I found taking a meta-approach to the content of this book to be a useful experience far in excess of those goals—and truly applicable to current problems and dilemmas in the field of mental health evaluation, diagnosis, and treatment.

The book serves as a reminder and wake-up call to the fact that "culture invades physiology and symptoms are an exquisite final common pathway of a complex, but ultimately comprehensible interaction of biological, psychological and sociocultural forces" (Bloom, 1981, p. 840). Yet while attempting such comprehension, we must be vigilant to respect that, in analogy, "There is no natural mapping from the individual letters which make up a book into the real world. If you wanted to describe the book, therefore, you would make no mention of the letter level [but rather] describe the plot and the characters and so forth" (Hofstadter, 1979, p. 332).

While providing a plethora of detailed data regarding the topic referred to in the title, *Measuring Specific Mental Illness Diagnoses with Functional Impairment* can be used as a gentle but firm reminder that "and so forth" is much more complex and problematic than we generally assume when applying statistical models to our work anywhere in the field of mental health.

References

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