

Commentary: **Psychiatric Training for Physicians: A Call to Modernize**

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Abstract

Genetics and the neurosciences are changing the knowledge base of psychiatry. The authors of this commentary argue that if psychiatry is to meet the considerable challenges associated with assimilating the rapid advance of those sciences and populating the field with new leaders who will contribute to such advances, fundamental problems in psychiatric education and training must be addressed. The authors argue that three domains in particular require change—an

overemphasis on the outmoded diagnostic system, a residual attachment to archaic psychoanalytic constructs, and an unwarranted confidence in current therapeutic capabilities. They then propose first steps aimed at remedying each domain. The authors suggest increased curricular emphasis on taxonomic approaches distinct from that of the current Diagnostic and Statistical Manual of Mental Disorders system, enhanced attention to and teaching of core cognitive neuroscientific concepts,

and a concerted emphasis on the development of skills needed for critical evaluation of the empiric bases of therapeutics. They conclude that progress in psychiatry requires that educators shift their emphases toward what is currently known and being learned—including the scientific sophistication needed to assess such claims of knowledge—and away from taxonomic and conceptual systems that are demonstrably flawed, if not simply wrong.

The total disease burden associated with psychiatric illness around the world is enormous. It is the responsibility of those who lead and teach the medical specialty of psychiatry to develop and impart to students and residents more valid and sophisticated understandings of psychopathology and to address more effectively the associated morbidity and mortality of psychiatric illness. Planning for the publication of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM) has engendered heated debate about the near future of psychiatric diagnostic classification.¹ Intrinsic to the contentiousness between those advocating its radical overhaul and those counseling conservatism is a judgment regarding the extent to which the DSM system serves the interests of the profession and our patients. In this context, we recommend a comprehensive reassessment of the foundations of contemporary psychiatry, focusing

specifically on the responsibilities of medical schools and residency training programs to prepare the next generation of physicians to integrate the ongoing explosion of neuroscientific knowledge into clinical thinking and practice. We suggest that current psychiatric education and training, which must be overhauled if our specialty is to fulfill its mission of understanding and relieving the serious diseases that fall within its purview, fails most seriously in three domains—poorly validated DSM diagnostic “rules,” antiquated psychoanalytic concepts, and exaggerated claims of the effectiveness of currently available pharmacotherapies. In addition to explaining each of these domains in more detail, we provide suggested next steps for training future generations of physicians.

Poorly Validated DSM Diagnostic “Rules”

In 1972, John Feighner and colleagues² at Washington University in St. Louis published sets of criteria to define operationally a handful of psychiatric diagnostic categories. Those Research Diagnostic Criteria were later expanded several-fold into the DSM-III—a major advance in psychiatric research, practice, education, and training. Investigators were now armed with a new set of diagnostic instruments and sought to discover the mechanisms that explain, and the interventions that treat, a wide variety of DSM-defined psychiatric

conditions. Subsequent revisions of the DSM (DSM-IV and DSM-IV-TR) have maintained the structure of the DSM-III, and it seems from the public announcements of the American Psychiatric Association that this structure will largely remain with the DSM-V as well. Conservatives on this topic make the accurate argument that we have not yet progressed to the point where an etiopathogenetically based nosology (as opposed to the DSM’s self-identified “descriptive” approach) is feasible. We must ask, however, whether we can expect the next generation of physicians to formulate etiopathogenetic understandings of psychiatric illnesses while we continue to devote a significant share of their psychiatric education and training to the details of a diagnostic system we already know to be seriously flawed. The neo-Kraepelinian assumption that abnormalities of emotion, cognition, and behavior exist as discrete categorical entities, defined in the DSM, is simply inconsistent with the manner in which genes and environments act and interact to produce brain function and dysfunction. Our students and trainees must begin learning those mechanisms and the likely phenotypes they underlie—instead of DSM diagnostic rules—if our clinical discipline is to remain relevant and useful.

Suggested next steps

Formulating a new system of psychiatric diagnosis is a monumentally complicated

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undertaking that is beyond the purview of this commentary. Considering how the diagnostic system in current use should be incorporated into our teaching and training, however, is not. Skepticism (and often cynicism) about the structure of the DSM, and the discrepancies between its criteria sets on the one hand and the clinical presentations of actual patients on the other, is already part of the “hidden curriculum.” The field will be strengthened by explicit discussion of those common intuitions about the weakness of the DSM system and by examination of alternative conceptual frameworks. Specifically, we should adjust our curricula to include instruction on the nature and aims of taxonomy and about the origins, underpinnings, and limitations of the framework currently used in psychiatry. The tentativeness of the current system should be emphasized, and reification of its categories and multi-axial structure should be discouraged. Assignment of DSM diagnoses may remain an administrative expectation but should not be considered an adequate substitute for narrative explanations of patients’ histories and clinical presentations. The requirement of reciting arbitrary DSM rules as a measure of competence for students or physicians in psychiatric residency training or beyond should be removed.

Concurrent with a de-emphasis on DSM diagnostic rules, we suggest that engendering sophistication in neuroscience be among the central aims of psychiatric education and training. The neural circuitry involved in the parameters of interest to psychiatry and the inherited and environmental influences on their normal and abnormal development and function are not yet sufficiently understood to form the basis of a new and complete psychiatric nosology. These topics are, however, far better characterized than the near absence of discussions about them in psychiatric teaching contexts would imply. We believe that changing that state of affairs is a prerequisite to producing clinicians and scientists who will advance the discipline and also that such an advance will necessitate the investigation of connections between clinical phenotypes and dysfunction of the neural circuitry that subserves the mental functions involved.

Antiquated Psychoanalytic Concepts

The unquestioned hegemony of psychoanalytic thinking and practice in American psychiatry has long since expired. However, some of its core concepts not only persist but also are among the staples of psychiatric education and training today, notwithstanding well-documented questions about their validity³ (which have not been allayed by developments in “contemporary psychoanalysis”⁴). We have become increasingly concerned with perpetuating psychoanalytic notions of the “dynamic unconscious” couched in the language of modern neuroscience and genetics. It is becoming a common argument that contemporary psychoanalytic thought is consistent with—or even confirmed by—advances in neuroimaging, memory, neuronal plasticity, genetics, and epigenetics. What is most worrisome about such assertions is that they almost make sense. Searching for an explanation of unconscious influences on behavior in order to justify continuing curricular investment in the concept of the dynamic unconscious, theorists have turned to cognitive neuroscience. Current neuroscientific theory, for instance, postulates multiple memory systems, including a declarative memory system and a procedural (or nondeclarative) memory system. The procedural memory system is a system that mostly remains outside of conscious awareness. Contemporary psychoanalytic theorists have co-opted this “memory outside of awareness” to support the existence of a dynamic unconscious that can retain memories from early childhood experiences and replay them in flexible contexts (e.g., when we are unconsciously affected by distant memories in the present moment⁵). Although seemingly a cogent and reasonable claim, it fails to take account of the large body of research on the nature of procedural memory, which has been shown not only to subservise motor learning and other such unconscious processes but also clearly to be unable to hold relational types of memories.⁶ Thus, a critical understanding of the properties of procedural memory reveals that it cannot support such purported products of the dynamic unconscious as transference and countertransference that are taught to our trainees. This example is but one of neuroscientific concepts and

findings—most recently including those of functional imaging—being marshaled to support outdated notions of mental function.

Suggested next steps

We suggest a redirection of time and curricular effort away from antiquated and unsupportable psychoanalytic constructs associated with the dynamic unconscious and toward a contemporary understanding of cognitive science. Such a shift is required if psychiatry hopes to participate in improving understanding of and therapies for psychopathology. This shift should retire psychodynamic indoctrination via the antiquated practice of “psychotherapy supervision” that is typically done by faculty members who have never seen patients whose care is being supervised and replace it with didactic and clinical instruction that incorporates modern formulations of cognitive and behavioral science. The bedrock of modern psychiatric training should be the fundamentals of cognitive neuroscience, including the developing theories of executive function, memory systems, attentional networks, and language processing. Armed with a firm grasp of the current state of knowledge about these fundamental aspects of neural function, trainees can move forward with a grasp of how malfunction of these systems may be associated with psychopathology, as well as how such conditions may effectively be treated.

Exaggerated Claims of the Effectiveness of Currently Available Pharmacotherapies

The profitability of the pharmaceutical companies (and of their neuroscience divisions in particular) could conceivably be justified if the ability of currently available pharmacotherapies for psychiatric disorders approached the claims made by the industry and implied by physicians’ ever-widening uses of their products. Unfortunately, that seems not to be the case. Several recent, large effectiveness studies (e.g., STAR*D⁷ and CATIE⁸) underscore the humility with which we should be approaching the results of our efforts to date, and more recently published data raise serious doubts about the benefits of antidepressant medications among the bulk of patients to whom they are currently prescribed.⁹ Nevertheless, the

number of patients taking psychoactive medications and the frequency of the coadministration of such drugs, despite a near absence of evidence supporting the efficacy and safety of multidrug therapies, continue to rise.¹⁰ The prevalence of psychiatric illnesses that warrants concerted efforts at amelioration and the desperate need for effective interventions to accomplish that end are not in doubt. What must be addressed, however, is how the education and training of future physicians can be altered in the service of solving these problems. Despite the recent ubiquity of the expression “evidence-based medicine,” development of our students’ and trainees’ abilities to assess the empiric literature has not received nearly the emphasis it requires to keep pace with the sophistication of marketing strategies that have resulted in more treatment without more relief.

Suggested next steps

Medical schools and residency training programs must embrace wholeheartedly their stated objectives of engendering “lifelong learning” among students and residents. In addition to the indispensable prerequisites of intellectual curiosity and professional obligation, this goal can only be fulfilled if trainees acquire a set of analytic skills that do not currently constitute priorities in the education and training of physicians in general and psychiatrists in particular. Recommended methods of addressing that critical shortcoming include far more attention in the didactic components of training programs to the topics of hypothesis generation and testing, research design, and statistical inference, as well as daily practice in the application of knowledge and skill in those domains. Such applications should include the expectation that clinical diagnostic and therapeutic conclusions and recommendations be accompanied by discussions of the evidence that

constitutes the bases on which such statements are made—including explicit recognition that such evidence is scant or nonexistent, as is frequently the case. The habit of mind that this expectation alone represents carries with it the potential to change psychiatric education and training—and, ultimately, practice—dramatically for the better. To address successfully the problems described earlier in this section, these recommendations must be supplemented with education (as is already occurring at many academic health centers) about the effects of commercial interests on the scientific process and on ways that the pharmaceutical industry distorts the process by which therapeutic decisions are made by physicians and patients. An understanding of these distortions, combined with higher expectations of scientific acumen and sophistication, act as needed antidotes to them.

The Future of Psychiatric Training

These are exciting times for the sciences that constitute the foundations of psychiatry. If our discipline is to assimilate, benefit from, and contribute to the rapid advance of those sciences, we must change the content of psychiatric education and training. Our discussion of the fundamental problems associated with the three domains described above is purposely provocative and necessarily brief. We hope that it will stimulate discussion and, ultimately, solutions. The well-being of future patients depends on the abilities of future physicians to practice a complex and ever-changing specialty, free of an outmoded diagnostic system, archaic psychoanalytic constructs, and unwarranted confidence in current therapeutic capabilities.

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