

Virtual Mentor

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POLICY FORUM

Research Funding Favors Allopathic Medications

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The enormous disparity between research funding for studies on conventional pharmacological therapies and nonconventional modalities reflects entrenched biases that promote Western allopathic medicine at the expense of promising treatments from non-Western systems of medicine. I wish to examine some of the ethical and practical consequences of the funding disparity with emphasis on mental health care. The limitations of conventional psychopharmacologic treatments suggest that an important future goal of mental health research should be the systematic evaluation of promising nonallopathic modalities.

Economic factors that interfere with the capacity of Western medicine to provide adequate health care include restrictions on available treatments under managed care, Medicare, and private insurance contracts; limited reimbursement for newer, more effective drugs; increasing costs of medical care for the average consumer; and absent or minimal coverage for most therapies that are not considered standard of care. At the same time, patient surveys indicate growing dissatisfaction with the quality of Western medical care because, in part, of concerns about efficacy and safety. As a result, increasing numbers of patients are turning to nonconventional therapies to treat medical and psychiatric disorders.

In addition to the economic and patient satisfaction elements, the trend is also fed by shifting values, renewed emphasis on healthy lifestyles, and research findings that support the use of such nonallopathic treatments as botanicals and mind-body practices that are common in many parts of the world [1, 2]. Studies have found that approximately 72 million adults in the U.S. used a nonconventional treatment in 2002, representing about one-third of the adult population [3]. If prayer is included in this analysis, almost two-thirds of adults use alternative therapies [4].

Millions of individuals in developed countries have benefited from advances in the neurosciences and psychopharmacology, which have resulted in novel biological treatments of mental illness. But this rapid growth in the use of pharmaceuticals is taking place at the same time that there is heightened concern about the safety and efficacy of many allopathic drugs. Findings from a systematic review suggest that adverse effects associated with prescription antidepressants exceed their desired therapeutic effects [5] and that worries about efficacy are complicated by the high costs of new drugs that render them unaffordable to many, including the indigent and elderly [6].

Biological psychiatry, positing that mental illness is caused by dysregulations at the level of specific neurotransmitters, is *a priori* biased against treatments used in non-Western systems of medicine that do not accept this explanatory model. In the U.S. and other developed countries, one consequence of this basic conceptual difference has been limited funding for studies on the majority of nonpharmacological modalities. In practical terms, the disparate perspectives of Western biomedicine and non-Western systems of medicine translate into a multibillion dollar pharmaceutical industry that conducts internal studies and funds FDA-sponsored, third-party research.

Unfortunately there is little financial incentive to sponsor studies on natural products—which are not patentable—or on somatic, mind-body, and “energy” modalities that are not viewed as potential sources of significant revenues. The National Center for Complementary and Alternative Medicine (NCCAM) of the National Institutes of Health is addressing these circumstances by funding studies on herbal medicines and other natural products, acupuncture, yoga, and energy medicine. NCCAM’s budget increased from \$117 million to \$121.4 million between 2004 and 2006; in contrast, growth in research spending in the pharmaceutical industry rose from \$49 billion to \$55.2 billion during the same time period [7]. Limited NCCAM funding for research on nonpharmacological modalities often results in small studies of short duration that produce findings of marginal statistical significance.

The disparity in research funding also has indirect consequences. Relatively few studies of nonconventional modalities are published in peer-reviewed medical journals, and the majority of those that are published are omitted from systematic reviews because they fail to meet inclusion criteria for size, study design, or statistical significance of outcomes. In short, more systematic reviews of allopathic modalities are published and there are more negative or inconclusive reviews of studies on nonconventional than on mainstream Western medical modalities. Publication bias is closely tied to funding sources for medical research. A study of the impact of funding sources on the validity and reliability of pharmaceutical research was conducted by the American Medical Association Council on Scientific Affairs, who found that over half the research contracts in university-industry-sponsored studies permitted researchers to delay publication, more than one-third of the contracts allowed the drug company sponsor to delete unfavorable data prior to publication, and 30 percent of these contracts allowed both delays in publication and selective deletion of information [8].

Publication bias has other consequences—a limited number of citations for quality studies on alternative treatments in the most widely referenced medical databases, including the largest publicly available medical database, PubMed [9], and the establishment of practice guidelines that typically fail to consider research evidence for alternative modalities. For example, the literature review process on which

American Psychiatric Association guidelines are based largely ignores citations of studies about nonconventional modalities [10].

A Case in Point: Treatment for Depression

In part because of entrenched industry-sponsored research funding practices and the publication biases discussed above, Western medicine has failed to address depression adequately. Due to the high incidence of suicide and comorbid medical and psychiatric illness, depression is regarded as the leading cause of death and disability among those who range in age from adolescence through middle age. The total economic burden of depression in the U.S. in terms of direct costs, mortality costs from depression-related suicides, and lost workplace productivity grew from \$52.9 billion in 1990 to \$83.1 billion in 2000 [11]. Monerief's systematic review of the literature found nonsignificant response differences between antidepressants and placebos and concluded that the risks associated with conventional antidepressant therapy "are less likely to be outweighed by their benefits than is currently believed to be the case" [12]. Independent analyses have concluded that the majority of pharmaceutical industry-sponsored trials of antidepressants fail to show significant response differences between the trial drugs and placebos [13-15]. The FDA has been criticized for its failure to disclose negative findings of industry-sponsored studies in general [16] and, specifically, studies of psychotropic medications [8, 17].

Controversy over the efficacy of antidepressants deepened in 2004 following allegations that efficacy data on antidepressants and other conventional pharmacological treatments used in mental health care were positively biased [17]. When published research data are analyzed together with previously classified findings, the effect that many of the antidepressants have are substantially reduced [17]. It has been determined using the Freedom of Information Act that unpublished industry-sponsored studies of antidepressants are *twice as likely* as published studies to report negative findings [18]. Based on that information, Turner concluded that "by altering the apparent risk-benefit ratio of [antidepressants], selective publication can lead doctors to make inappropriate prescribing decisions that may not be in the best interest of their patients and, thus, the public health" [18].

Over half of all patients who use conventional antidepressants are not treated by psychiatrists and have never been formally diagnosed using the widely accepted *Diagnostic and Statistical Manual of Mental Disorders* [19]. Of those who are formally diagnosed and receive recommended doses of antidepressants, between 40 and 70 percent fail to respond [5]. The problem of nonresponse is compounded by reports of overall worsening of depressed mood when antidepressant drug treatment is long term [20]. The controversy surrounding widely prescribed antidepressants recently escalated following reports that chronic use of antidepressants in children and adolescents may be associated with increased suicide risk [21, 22].

Limited research funding for studies on alternative modalities translates into continued slow progress in the development of promising biological and mind-body treatments. Barring significant policy changes in federal and private research

funding, emphasis on psychopharmacology in mental health research will relegate investigations of promising nonconventional modalities to a low priority. Subsequently, researchers and clinicians will have limited or no exposure to emerging paradigms that may lead to more adequate explanatory models of mental illness including functional medicine, complexity theory, psychoneuroimmunology, and novel models in mind-body and energy medicine.

Conversely, increasing the use of cost-effective alternative and integrative treatment strategies will translate into reductions in long-term costs associated with expensive prescription pharmacological treatments that frequently yield equivocal outcomes. Among alternative modalities that are cost-effective relative to more widely used conventional therapies are acupuncture for migraine headaches, manual therapy for neck pain, spa therapy for Parkinson's, self-administered stress management for cancer patients undergoing chemotherapy, biofeedback for irritable bowel syndrome and other "functional" disorders, and guided imagery, relaxation therapy, and potassium-rich diets for cardiac patients [23].

The debate over the safety and efficacy of nonconventional modalities is taking place in the context of an ideological divide between orthodox biomedical psychiatry and established non-Western systems of medicine. If reason prevails, this controversy will eventually be resolved by policy changes in the FDA and the pharmaceutical industry that will demand unbiased disclosure and publication of all research findings for both conventional and nonconventional treatments of major depressive disorder and other psychiatric disorders. Increased use of validated alternative and integrative treatment approaches can lead to improved mental health care in all segments of the population and commensurate reductions in the enormous medical, social, and financial burdens of mental illness. Increased use of nonconventional modalities in mental health care can yield such important, though less tangible, benefits as increased patient autonomy and reductions in job productivity losses and other indirect costs associated with the high incidence of serious psychiatric disorders that are currently untreated or undertreated.

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Relevant Web Sites

American Psychiatric Association Caucus on Complementary, Alternative, and Integrative Medicine, www.APACAM.org.

Integrative Mental Health: Web site of Dr. James Lake, IntegrativeMentalHealth.net.

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