An American scientist's iconoclastic response to *Psychotherapies for Anxiety and Depression: benefits and costs*

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Introduction

Psychotherapies for anxiety and depression: benefits and costs is an important position paper that advocates for the research and treatment of these two devastating disorders that are highly prevalent not only in Italy but throughout the world. The emphasis here is on evidence-based treatment and economics. This takes into consideration the preference, at least in Italy for psychological treatments over pharmacologic, as well as the importance of marshaling scarce financial resources through the national healthcare system. As noted, the economic burden of untreated anxiety and depression including, for example, absences from work, needs to be factored in. Cited was the Improving Access to Psychological Therapies (IAPT) program which draws much of its rationale from the *Depression Report* of Great Britain. I would like to address these concerns with considerations given to cultural differences, alternative psychological treatments, and efficacy and effectiveness as determined by randomized double-blind studies and meta-analyses.

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Key words: Iconoclastic response; Psychotherapies; Anxiety; Depression.

Citation: Hirsch, J.A. (2017). An American scientist's iconoclastic response to *Psychotherapies for Anxiety and Depression: benefits and costs. Research in Psychotherapy: Psychopathology, Process and Outcome, 20*(2), 139-142. doi: 10.4081/ripppo.2017.275

Received for publication: 10 May 2017.
Accepted for publication: 6 June 2017.

Research in Psychotherapy: Psychopathology, Process and Outcome 2017; 20:139-142
doi:10.4081/ripppo.2017.275

Economics

I offer the perspective of an American psychologist and neurobiologist who practices in a very different system from that in Italy and much of Western Europe. There are great similarities in treatment, to be sure, but there are distinct differences in funding for such services. While the adoption of the Affordable Healthcare Act (ACA) in 2009 improved access to services reduced but did not entirely eliminate institutional biases toward funding for mental health treatment versus that for purely biological disorders. Another impediment has been insurance funders increasing out-of-pocket yearly deductible expenses before direct reimbursement of services begin. And, as a side note, the ACA's very future is imperiled by the incoming Trump administration and a very different, and a hostile Congress. Even in its present form, health care in the United States is less coordinated than in Europe and approval of services varies from one locality to another and from one insurance company to another that underwrites treatment. Funding and approval of services is far more reliable under the national Medicare system (and its now threatened daughter, the individual- state-managed Medicaid). Whether Medicare or private insurance, there is increased emphasis on evidence-based diagnostics and treatments for approval of payment, to minimize unnecessary expenditures.

The economic urgency to treat emotional disorders was first addressed in the United States by President John Kennedy in his 1963 special message address to the Congress (Kennedy, 1963). Remarkably President Kennedy addressed many of the same themes discussed in the position paper here. For example, he noted that the public health service and the National Institutes of Health were charged with the *responsibilities to assist, stimulate, and channel public energies in attacking health problems.... But the public understanding, treatment, and prevention of mental disabilities have not made comparable progress since the earliest days of modern history... Yet mental illness and mental retardation are among our most critical health problems*. President Kennedy went on to discuss the specific taxpayer costs, risks of a lifetime of disability

for the patient and hardship for the family, and the then-balkanized approach of individual states rather than the federal government managing treatment of mental illness. He advocated a *bold new approach* that incorporated *new medical, scientific, and social tools and insights*, a national program for mental health subsidized by the federal government of the United States, and enhanced training of mental health professional professionals as well as auxiliary personnel. Sadly Kennedy's challenge was never fully realized in the United States.

Science behind the treatment

In recent decades there has been a refinement in our understanding of the brain as the mediator of cognitive and emotional functioning and the Cartesian mind-body duality has largely fallen by the wayside. Unfortunately, here in the United States this has been skewed toward favoring so-called biological treatments as opposed to psychological by the payer due, in part, to the greater cost of often lengthy courses of generic psychotherapy when compared to, say antidepressants or anxiolytics. In this regard, the conference position paper makes an enormous contribution toward advocating for treatments that are time limited and have been shown to work as opposed to psychotherapeutic approaches that have not been rigorously tested. Potentially proving cost effectiveness of psychological treatments may alter the favoritism accorded drug treatments here in the United States. Supporting the Italian position was the recently published report of the effectiveness of psychological treatments targeted specifically to youth in the United States (Weisz et al., 2017). The results were compelling. The meta-analysis of more than 400 studies that involved 30,000 youth over a fifty-year period clearly demonstrated the effectiveness of psychological treatment for anxiety but curiously not for clinical depression. (Methodological problems may have been contributory.) It is especially noteworthy that in this report no firm conclusions could be drawn that CBT was superior to other psychological treatments. The significance of this will be discussed below.

The conference position paper cites sound research to substantiate its argument for promoting psychological therapies as opposed to pharmacotherapy. This author agrees. However praiseworthy evidence-based research is, with random assignment and placebo control essential, numerous caveats abound. Surely it makes sense prima facie. While the conduct of good clinical trials needs to be double-blinded, acceptance of conclusions should not be blind, but rather requires critical analysis by the consumer or payer. Thus, meta-analysis, the gold-standard of validating evidence-based research, may potentially be used by insurers (National Health Care System in Italy, Medicare and private insurance companies in the United States) to justify or reject payment of treatment. However, Shih, Yang & Koo (2009) aptly state that meta-analytic research should not be accepted as the final statement on efficacy, let alone effectiveness, as many such studies themselves may suffer from selection bias, data irregularities, heterogeneity of the selected studies, publication bias in favor of positive outcomes, and retrieval bias. In addition, McConaghy (1990) argues that the process of standardization of effect size in meta-analytic studies results in distortion of perceived outcomes. He suggests that meta-analyses be guides rather than substitutes for literature review.

Biases in research

The preponderance of research in the treatment of anxiety and depression has been with pharmaceuticals. This reflects the biases of those who underwrite a significant majority of these studies – pharmaceutical companies. This results in research bias and consequently meta-analytic bias in the overreliance on efficacy studies of psychopharmacological as opposed to psychological approaches. Consequently, if the overwhelming majority of research shows efficacy of one medication as opposed to another rather than between different modalities (*e.g.*, pharmacologic *versus* psychologic), this will be used by insurers both public and private as justification for payment of pharmacotherapy rather than psychological treatment. Even when psychological treatments have been shown to be efficacious, discussion of them usually forms a much smaller part of an omnibus review article (Bandelow et al., 2008). As admirable as the The Scientific Committee of Conference *Psychotherapies for Anxiety and Depression: Benefits and Costs* position statement may be, it too may suffer from a philosophical bias – one that favors Cognitive Behavioral Therapy (CBT), Interpersonal Therapy and Brief Dynamic Psychotherapy-based interventions as opposed to other psychological treatments. The authors fail to consider meta-analytic research that demonstrates efficacy and effectiveness of hypnotherapy, cognitive hypnotherapy, and virtual reality exposure (VRE) therapy for the treatment of anxiety disorders, specific phobias and posttraumatic stress disorder (PTSD; Golden, 2009; Pull, 2005; Rotaru & Rusu, 2016). In many instances these benefits are comparable to those after CBT treatment (Safir, Wallach, & Bar-Zvi, 2012). Hypnosis has been shown to be efficacious in the treatment of depression (Shih, Yang, & Koo, 2009) and cognitive hypnotherapy may add incremental value to standard CBT (Alladin & Alibhai, 2007). Mindfulness-based therapy is equi-efficacious with CBT, behavioral, and pharmacotherapy in patients who suffer from anxiety and depression (Khoury et al., 2013). This oversight is curious since hypnosis research is quite active in Italy (Pekala et al., 2017) and Italy is well represented in the International Society of Hypnosis.

Criticisms of evidence-based treatment

A major criticism of evidence-based medicine (and by extension evidence-based psychological treatments) is this: Is it indeed superior to non-evidence based research? Cohen & Hersh (2004) argue that RCTs and meta-analyses have not been found to be more reliable than other research methods, that they exclude information necessary to make informed decisions, and do not integrate non-statistical forms of medical information such as professional experience and patient specific factors.

We need to consider that while CBT, Interpersonal Therapy, and Brief Dynamic Psychotherapy – or for that matter hypnosis, VRE therapy, and mindfulness – may be effective treatments for anxiety and depression for the majority of sufferers, not everyone is going to be helped. This is suggested by Straus and McAlister (2000) and Greenhalgh, Howick and Maskrey (2104) that even evidence-based research has limitations, including being able to apply findings to individual patients. How much of this is due to biological variability, or at the very least, individual psychological variability, is unknown and needs to be teased out to determine the correct procedures or therapies for individual patients. To draw an analogy from the world of pharmacology, different patients even with the same diagnosis may respond to one drug and not another. The role of pharmacogenetics or other biological differences in helping to make informed decisions with regard to prescription of the most effective drugs for a particular patient is still in its infancy. Polypharmacy or the usage of two or more drugs that act through different mechanisms may enhance the effect of each when used in combination. To continue with this analogy but now with psychotherapy, consideration should be given to the use of different psychological treatments that act synergistically in treating anxiety or depression (Hirsch, 2012, 2017).

Lastly, I would add that the use of the term *scientific* by the committee is a misapplication of the term, since nothing specifically scientific has been demonstrated by the clinical studies alluded to (efficacy) or the corresponding subsequent follow-up studies (effectiveness). Indeed, much great science has been achieved without the application of statistical analysis or even, by today's standards, good statistically-sound experimental design. I speak from personal experience, having studied with a future Nobel laureate, for whom today's emphasis on significance, effect size, and power would be a mystery. This does not negate the suggestions made by the committee, but rather, does clarify what is advocated.

Conclusions

The committee's paper convincingly argues for using evidence-based psychological treatments like CBT, Interpersonal Therapy and Brief Dynamic Psychotherapy as first-line therapies for anxiety and depression. However, the good clinician must not act mechanically with an overemphasis on following an algorithm (Greenhalgh, Howick and Maskrey, 2104), something I believe may become an unintended consequence of the committee's recommendations. Rather the psychologist should tailor the treatment to the patient. I suggest that this position statement is a start but not an end to the discussion of effective and efficient treatment of anxiety and depression. The inclusion of other psychological and biologic treatments, with a greater appreciation for individual differences, may ensure that an even greater number of patients will benefit.

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