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An Evidence-Based Response to Dr Andrade's Commentary on Our Review of the ECT Efficacy Research

To the Editor: Dr Andrade describes my review of placebo-controlled trials of electroconvulsive therapy (ECT),¹ undertaken with Dr Irving Kirsch, Associate Director of Placebo Studies at Harvard Medical School, as “misinformation,” generating a “manufactured controversy.” The findings were apparently “so extreme that to respond to them might give them a legitimacy that they do not deserve.”² This discourteous diatribe is unfortunate.

Dr Andrade does not critique our methodology. He offers 5 arguments often used to defend ECT. Whenever reminded of the appalling quality of the placebo-controlled studies (all pre-1986),^{1,3} ECT proponents argue that non-placebo studies, such as comparisons of various electrode placements, are sufficient. A review of these, however, revealed that none “produced robust evidence that ECT is effective for depression, primarily because at least 60% maintained ECT participants on medication and 89% produced no meaningful follow-up data beyond the end of treatment. No studies investigated whether ECT prevents suicide.”⁴

Second, we are told “it would be unethical”² to treat seriously disturbed patients with sham ECT. Prohibiting research about whether or not *X* works, because we can't withhold *X*, because we know *X* works, positions ECT advocates beyond the parameters of evidence-based medicine.

Third, we are reminded that ECT has “survived from its inception in 1938 to this date,” so it must be a good idea. History is littered with “treatments” that survived decades before being deemed ineffective, harmful, or both, including lobotomies.

Fourth, the absence of evidence of long-term benefit is dismissed by recommending “maintenance therapy with medications,” forgetting that ECT is targeted at people that don't respond to antidepressants.

Fifth, Andrade thrice refers to ECT as being for “suicidal” patients. There is no evidence that ECT prevents suicide.^{1,5-7} A recent study found that 14,810 ECT patients were 1.3 times more likely to die by suicide within a year than 58,369 non-ECT controls.⁵

Andrade makes much of the absence of placebo-controlled studies for parachutes. If between 12%⁸ and 55%⁹ of jumpers suffered persistent or permanent memory loss and a parachute manufacturer listed “permanent brain damage” and “death” as risks,¹⁰ other plane-exiting strategies might be sought.

To help readers assess the sagacity of Andrade's opinions about ECT, he might clarify whether he still supports “unmodified ECT” in which the electric shock is applied without general anesthetic.¹¹⁻¹⁵

There are reasons that nobody uses unmodified ECT in the US and that only about 1,000 of the 49,000 US psychiatrists use ECT at all.¹⁶

Amid an outpouring of venom about our review that made Dr Andrade's words look positively polite, one of the vast, but usually silent, majority of psychiatrists who never administer ECT recently wrote:

My long-term memory was destroyed. Memories of childhood friends, memories of major events I attended, memories of my training as a psychiatric registrar. I started struggling with simple spelling and calculations.... I never told colleagues about this, as I felt ashamed. But I started talking to other people who had ECT and realized I am not alone. I can understand some of the negative response by colleagues to this article, but I have to admit that I welcome the argument.¹⁷

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If ECT Is a Placebo, We Need More of Such Placebos in Psychiatry: Reply to Read

To the Editor: The purpose of my article¹ on the efficacy of electroconvulsive therapy (ECT) was not to convince Dr Read, with whom I must courteously agree to disagree, but to present to students and professionals arguments that are evidence-based as well as amusing but logically sound. Dr Read's "evidence-based response"² to my article contains no evidence at all; rather, it restates opinions that I have already refuted.¹ In this letter, I will therefore limit myself to other issues that he has raised.

First, Dr Read's ad hominem attack is surprising. Unmodified ECT was nowhere a subject in my commentary, and the issue appears to have been brought up solely with a view to discredit me. Because he has raised the issue, I offer my answers. He is mistaken; it is the failure to administer muscle relaxant, and not general anesthesia, that defines unmodified ECT; this is because "modification" refers to modification of the peripheral seizure and not modification of the level of consciousness.³ And he is mistaken; I have never supported unmodified ECT. In fact, I conducted 2 studies^{4,5} in an attempt to demonstrate that unmodified ECT is associated with musculoskeletal and other morbidity. Furthermore, I have across decades described adverse consequences of unmodified ECT, expressed reservations regarding its use, and suggested how its use may be curtailed.⁶⁻⁸

The selective reference to Peltzman et al⁹ is inaccurate and misleading. This observational study found that suicide was 0.31 times more likely in the ECT group, and not 1.31 times more likely, as Dr Read states (the odds ratio was 1.31); and Dr Read perhaps deliberately neglected to inform readers that this 0.31 times increase in risk was not statistically significant. Readers may further note that such observational studies are vulnerable to confounding by indication because patients who receive ECT tend to be more severely ill than those who don't receive the treatment, and adjustments for indices of illness severity are inevitably plagued by inadequately measured and unmeasured confounds. Dr Read failed to cite the equally relevant study by Liang et al¹⁰ which found that ECT significantly reduced the hazard of suicide in both unipolar depression (hazard ratio [HR], 0.79; $P = .041$) and bipolar depression (HR, 0.81; $P = .046$).

Dr Read misses the point when he states that history is littered with "treatments" that survived decades before being deemed ineffective, harmful, or both. He may please note that ECT has survived to the present date; this is an era in which the bar for safety and efficacy are set at high levels, and an era in which it would be impossible for a dangerous and ineffective treatment to continue to find worldwide acceptance. If Dr Read believes that ECT is cognitively damaging and is no more effective than placebo, then I welcome suggestions for placebos that improve quality of life in elderly depressed patients¹¹; placebos that are superior to repetitive transcranial magnetic stimulation,¹² which is an approved intervention for depression; and placebos that can replace ECT in treatment guidelines for the management of catatonia, psychotic depression, and treatment-refractory depression.

Dr Read's assertions about persistent and permanent memory loss, permanent brain damage, and death are hyperbolic. No

acknowledgment is made that the cognitive deficits are mostly subtle, detected only on formal testing, and have no impact on functioning in everyday life. By Dr Read's standards, all medical and surgical interventions should be prohibited because none is safe.

Finally, if Dr Read champions high-quality evidence, he ought not to offer non-peer-reviewed, objectively unverified, personal impressions about the cognitive harms of ECT. Negative endorsements are not evidence. In fact, illuminating though they may seem, even detailed case reports on the subject are not evidence and can be surprisingly misleading, as we recently showed.¹³

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