



EDITORIAL

We need to talk science

Daniel Guinart, MD, PhD ^{1,2,3,5,*}, Victor Perez-Solà, MD, PhD ^{1,2,4,5}

¹ Institut de Salut Mental, Hospital del Mar, Barcelona, Spain

² Hospital del Mar Research Institute, Barcelona, Spain

³ Department of Psychiatry and Molecular Medicine, Northwell/Hofstra University, New York, USA

⁴ Universitat Pompeu Fabra, Barcelona, Spain

⁵ Centro de Investigación Biomédica en Red de Salud Mental (CIBERSAM), Madrid, España

The practice of psychiatry, as a medical discipline, must necessarily be rooted in evidence-based practices. A basic principle of evidence-based practices is to employ preventive strategies, assessments, diagnoses, and treatments that are supported by rigorous scientific research.

By adhering to such standardized frameworks, healthcare professionals can ensure replicable and accurate identification and classification of disorders, but also appropriate interventions and treatments that lead to optimized outcomes for patients. Randomized controlled trials, systematic reviews and meta-analysis provide critical evidence regarding efficacy and safety of the treatments that we use, either psychotherapies, medications, or psychosocial interventions. By grounding our practice on scientific evidence, we aim to provide the best possible patient care, while minimizing harm. Additionally, providing patients with treatments that are effective, safe and with a positive risk-benefit analysis is an ethical imperative.

The scientific method, however, allows for informed criticism, and even the debunking of standing theories, and replacement for better, evidence-based, alternative hypotheses¹. This is how science works; the rules are clear and apply to everyone. However, the rise of the internet and particularly social media has allowed misinformation and pseudoscientific messages to be broadcasted to a large audience, much larger than what the average scientist or government will ever be able to achieve². Wellness cures, miracle diets, immune system boosters, mysterious and varied detox enemas and other dangerous antiscientific practices become trending in social media under false pretexts,

with little to no evidence of effectiveness, and many potential harms, while enriching their promoters. Meanwhile, professional organizations, governments, and the medical community in general react slowly, if at all. The covid-19 pandemic has provided numerous examples of this unfortunate reality. For instance, scientists and experts who have devoted their entire life to studying infectious diseases, virology and vaccine development have been challenged and ridiculed by newly minted internet experts whose only academic requirement was to own a Twitter account or to run a Podcast. It is almost comic if it were not truly concerning.

And let us be clear: there are many criticisms to be made about the current state of affairs in medicine and science in general, and in psychiatry in particular, and it would be wise to listen carefully. In the case of psychiatry, we have an intrinsic tendency to fall in love far too quickly with new hypes: now it's the turn of psychedelics. We did the same with genetics, or with neuroimaging, or with ketamine; promising too much and too early, building sandcastles just because we are craving groundbreaking findings. But one cannot have a penicillin discovery every decade. We must also acknowledge we have been lied to by industry propaganda and misleading advertising that have hurt our image and have damaged our credibility. Some reckoning is warranted, and a well-intentioned, thought-provoking critical psychiatry is needed to move the field forward.

However, we face more than just reasonable criticism. Lately, not-so-new antipsychiatry movements disguised as critical psychiatry have resurfaced and are now broadcasting a new narrative challenging the efficacy of evidence-based, safe and potentially life-saving treatments such as antipsychotics, antidepressants or electroconvulsive therapy based on selective and biased interpretations of the available

* Corresponding Author:

E-mail address: dguinart@psmar.cat (D. Guinart).

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data, which has unfortunately received uncritical and disproportionate attention from some generalist media^{3,4}.

Treatment strategies that are safe and effective to treat potentially deadly conditions should be made available to those who need them. Alternative, selective, vague, or openly pseudoscientific interpretations of the available evidence based on ideology and doctrine, but not on science, can put patients at risk, generate pill-shaming behaviors and stigmatization, and are prone to terrible risks, including potential harm by delaying much-needed treatment, hampered recovery, unnecessary suffering, and even worse clinical outcomes. Evidence-based psychiatry ensures that treatments and interventions are based on reliable evidence of their efficacy and safety. When that approach is disregarded, individuals who suffer from mental ill health may recur to unproven or ineffective therapies, allowing room for quackery and pseudoscience to take advantage of vulnerable populations. An alarming alliance. Further, unlike critical psychiatry, antipsychiatry risks harming the scientific community as a whole, perpetuating misinformation, and hampering scientific funding and progress.

The threat of antipsychiatry cannot be dissociated from the current global context, but the antidote is local and will require a combination of promoting scientific literacy and critical thinking, improving accessibility and dissemination of evidence-based research findings among the general public, and ensuring that accurate information reaches those who need it most. Policymakers and advocacy groups must be involved in this endeavor, fostering partnerships with universities and scientific organizations to help raise awareness and combat the spread of antipsychiatry and misinformation.

There is room for cautious optimism, but we are at a pivotal moment. In the last few decades, we have gained profound knowledge about the neurobiology of a wide array of mental disorders and syndromes, new molecules and treatment formulations with advantageous properties have emerged, and we have moved decisively forward in recognizing the vast importance of the social determinants of health, coming to coin what is known as the biopsychosocial model, that has been an unprecedented, overarching, and inclusive approach to mental health. We should not let this inclusive approach be torn apart by guild battles between the bio, the psycho or the social, as they are all complementary, and only together we will be able to combat antipsychiatry.

Fighting disinformation regarding mental health should be our priority as a field. There is no middle ground between evidence and lack thereof, and the public must be informed about the real risks of pseudoscience. We cannot continue stepping on eggshells. We must engage vigorously in

debunking falsehoods on every occasion, and if possible, directly from its sources, which sometimes lie unfortunately within mental health professionals themselves. We must also educate medical students, residents and attendings in basic scientific literacy and critical thinking: one should not be able to practice medicine without being able to understand a clinical trial. Clinical practice cannot be dissociated from research and science, as the evidence-based guidelines and treatment algorithms we follow emanate from it. The false dichotomy between clinical and research work is imaginary, only to be found in the minds of those who foster disregard for science.

Only by embracing the principles of scientific research, evidence-based symptom measurement and diagnosis, prevention strategies and, of course, treatments, we will be able to make progress in addressing the complex challenges associated with mental disorders. Governing agencies must ensure that the highest possible quality of evidence-based care is being provided for all service users under their responsibility. Funding agencies must continue to promote and foster scientific research to accelerate the generation of knowledge but also the rapid implementation of evidence-based practices into mental healthcare systems, which takes too long still. Lastly, we must not be afraid to speak up and engage in debunking mental health misinformation and pseudoscientific discourses, whenever and wherever the occasion may arise. Scientific literacy and critical thinking must be promoted among healthcare professionals, patients, and the general public. Only by promoting science and evidence-based care, we will continue to pave the way for a future where mental health conditions are more effectively understood, prevented, and treated.

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