

Review of: "“Correlation does not imply Causation”, while Psychotropic Drugs do cause Neurochemical Imbalances and Dysfunction of Neurotransmission"

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This article is interesting. It faces the important and timely issue of the efficacy of using psychotropic drugs to cure and/or ameliorate mental illness, questioning the involvement of neurochemical imbalance in their etiopathogenesis. The latter is the main current scientific rationale for the use of the above-mentioned drugs.

There are some points that, I think, should be addressed by the author.

1. The author often refers to psychotropic drugs, on the whole, while the molecular mechanisms as well as the biological and clinical effects may be very different among different classes of drugs. For example, some SSRIs, but not other psychotropic drugs, have proven to enhance endogenous neurogenesis by means of mechanisms still unclear. Eventually, adult hippocampal neurogenesis has been shown to have an antidepressant function.
2. The author should mention and discuss the effect of some psychotropic drugs, such as SSRIs, on neurogenesis. There are many data pointing towards SSRIs as promoting neurogenesis and/or neuronal differentiation. For example, fluoxetine can restore plasticity and promote the recovery of visual functions in amblyopic animals. In this regard, the author might argue that enhancing plasticity is not always a good thing (i.e., maladaptive plasticity) and raise the issue that clinicians should use caution, especially in pediatric patients whose brains are more amenable to be modified. In any case, this theme cannot be neglected in a review that highlights the dangerous effects of psychotropic drugs.
3. Similarly, while questioning the influence of neurotransmitter imbalance on mental illness, the author has left out the role of brain inflammation and BDNF in depression. Both of them can be modified by environmental factors such as physical exercise and/or nutrition.

In conclusion, I think that the article is interesting and worth publishing, provided that the above-mentioned points will be addressed.