Letter to the Editor

Toward a dynamic immunopsychiatry

ABSTRACT

In this article, we briefly clarify several points regarding immunopsychiatry. In particular, we argue that higher density data and a greater focus on temporal dynamics are both important, and that studies incorporating these features have the potential to greatly advance the field. We also respond to recent comments made on our original article on this topic (Moriarity and Slavich, 2023), including the contention that our perspective on immunopsychiatry is reductionistic. To the contrary, we believe that strong immunopsychiatry studies are highly integrative and include data from multiple major levels of analysis to form a more complete picture of how processes that are relevant for mental health and behavior emerge and dynamically change over time in relation to one another.

Dear Editor,

Thank you for the invitation to respond to Dr. Schubert's Letter to the Editor concerning our recent article, titled "The future is dynamic: A call for intensive longitudinal data in immunopsychiatry" (Moriarity and Slavich, 2023). We were delighted to see the immediate attention our article garnered and welcome the opportunity to discuss these topics further.

In his thoughtful letter, Dr. Schubert provided a detailed summary of his research program, which we enjoyed reading. In doing so, Dr. Schubert expressed enthusiasm for the main thesis of our article—namely, that higher density data and a greater focus on temporal dynamics are important—and also concern that we failed to cite a "substantial body of research" relevant to this topic—specifically, four empirical papers and one editorial published by him and his team. Dr. Schubert posits that our omission was due to a lack of serious consideration of idiographic/N-of-1/case studies.

In grappling with our own confusion regarding the expectation that those references should have been cited, we revisited our paper and its stated rationale. In doing so, we realized that, first, as indicated by the title, abstract, and body of our article, our paper focused specifically on immunopsychiatry, not on the health sciences more broadly. Given that none of the articles Dr. Schubert referenced focused on psychiatric symptoms… the closest match was "mood states", although it does not appear that clinical mood states or DSM/ICD-assessed psychiatric symptoms were measured... these articles are certainly interesting, but they are not immunopsychiatry papers. Second, as we noted in the second paragraph of our article, our paper was not intended to be a comprehensive review of all existing intensive longitudinal psychoneuroimmunological data. Rather, it was a methodological overview that sought to introduce readers to how intensive longitudinal data can improve study rigor, replicability, and translational value in immunopsychiatry.

That aside, given that our article—and, indeed, most of our work—spans multiple major levels of analysis (e.g., Mengelkoch et al., 2023; Moriarity et al., 2023; Slavich et al., 2023), we were also surprised to see Dr. Schubert's suggestion that his work was excluded specifically because of a "paradigmatic mechanistic-reductionistic ideology" resulting in "little attention paid to single-case studies." This was especially surprising since the first substantive section of our article was dedicated entirely to Simpson's Paradox (Simpson, 1951) and ergodicity, often considered primary rationale for idiographic/N-of-1/case studies. In addition, Figure 2 in our article specifically illustrated the lack of generalizability between individual-level and group-level data, arguing that "overreliance on methods that aggregate across individuals obscures nuance that is critical for successfully translating basic research to clinical impact," which is what Dr. Schubert, himself, concludes in his Letter.

In sum, we believe that Dr. Schubert's work on the dynamics of idiographic psychoneuroimmunological processes should be applauded and that a review of this work would help highlight the clinical utility of psychoneuroimmunological case studies. If Dr. Schubert chooses to synthesize this work in a future review paper, we will be the first to read it.

CRediT authorship contribution statement

D.P.M. and G.M.S. contributed equally to the writing of this article.

Data availability

No data were used in the preparation of this article.

References

Mengelkoch, S., Rose, M.-F.S., Lautman, Z., Alley, J.C., Roos, L.G., Ehlert, B., Moriarity, D.P., Lancaster, S., Snyder, M.P., Slavich, G.M., 2023. Multi-omics approaches in psychoneuroimmunology and health research: conceptual considerations and methodological recommendations. Brain Behav. Immun. 114, 475–487. https://doi.org/10.1016/j.bbi.2023.07.022.

Moriarity, D.P., Grehl, M.M., Walsh, R.F.L., Roos, L.G., Slavich, G.M., Alloy, L.B., 2023. A systematic review of associations between emotion regulation characteristics and inflammation. Neurosci. Biobehav. Rev. 150, 105162 https://doi.org/10.1016/j.neubiorev.2023.105162.

Moriarity, D.P., Slavich, G.M., 2023. The future of immunopsychiatry is dynamic: a call for intensive longitudinal data collection. Brain Behav. Immun. 112, 118–124. https://doi.org/10.1016/j.bbi.2023.06.002.

Simpson, E.H., 1951. The interpretation of interaction in contingency tables. J. Roy. Stat. Soc.: Ser. B (Methodol.) 13 (2), 238–241.

Slavich, G.M., Roos, L.G., Mengelkoch, S., Webb, C.A., Shattuck, E.C., Moriarity, D.P., Alley, J.C., 2023. Social safety theory: conceptual foundation, underlying mechanisms, and future directions. Health Psychol. Rev. 17, 5–59. https://doi.org/10.1080/17437199.2023.2171900.

Daniel P. Moriarity[*], George M. Slavich
Department of Psychiatry and Biobehavioral Sciences, University of California, Los Angeles, CA, USA

[*] Corresponding author.
E-mail address: dmoriarity@mednet.ucla.edu (D.P. Moriarity).