

Behavioral activation therapy for depression is associated with a reduction in the concentration of circulating quinolinic acid – Erratum

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The authors of the *Psychological Medicine* article “Behavioral activation therapy for depression is associated with a reduction in the concentration of circulating quinolinic acid” (Savitz *et al.*, 2020) have identified an error in one of the analyses and associated results reported. The error specifically related to Hypothesis 3, that the magnitude of change in blood biomarkers from pre- to post-therapy would be associated with improvements in depressive symptoms. The original manuscript reports that the increase in the kynurenic acid (KynA) to quinolinic acid (QuinA) was associated with the decrease in PROMIS-Depression scores ($F_{11,218} = 1.7$, $p = 0.074$, Cohen's $f^2 = 0.054$), and that the decrease in IL-1RA was marginally associated with the decrease in PROMIS-Depression scores ($F_{11,218} = 1.8$, uncorrected $p = 0.057$, Cohen's $f^2 = 0.082$) but did not survive FDR correction. An error was found in the code that calculated the percent change in the biomarkers from pre- to post-therapy (using the post-treatment values as the denominator rather than the pre-treatment values). Correcting this calculation results in minor changes to the values for percent change and once corrected, the association between the change in KynA/QuinA and PROMIS-Depression scores was no longer significant ($F_{11,218} = 0.9$, $p = 0.504$, Cohen's $f^2 = 0.034$), and the association between the change in IL-1RA and PROMIS-Depression scores was strengthened ($F_{11,218} = 2.6$, uncorrected $p = 0.004$, Cohen's $f^2 = 0.084$) but still did not survive FDR correction (Benjamini-Hochberg adjusted $p = 0.141$). This correction does not affect any of the other results reported in this study, nor does it alter our overall interpretation of the results.

Reference

Savitz, J., Ford, B., Yeh, H., Akeman, E., Cosgrove, K., Clausen, A., . . . Aupperle, R. (2020). Behavioral activation therapy for depression is associated with a reduction in the concentration of circulating quinolinic acid. *Psychological Medicine*, 1–10. [doi:10.1017/S0033291720004389](https://doi.org/10.1017/S0033291720004389)