Review of: "Prediction and Analysis of Structural Brain Health Indicators Using Deep Learning Models with Functional Brain Images as Input"

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Potential competing interests: No potential competing interests to declare.

This study presents compelling evidence demonstrating that the brain healthcare quotient (BHQ), derived from gray matter volume, can be accurately predicted using resting-state fMRI data. The authors highlight the importance of having an assessment tool that considers the functional aspect of brain health. In light of this, it might be more advantageous to directly predict age and cognitive function from resting-state fMRI. Offering further insight into the significance of predicting BHQ from rsfMRI would likely benefit the readers.

The author introduces a modified GM-BHQ; it would be beneficial to elucidate the rationale behind this modification and discuss its impact on the outcomes.

During graph construction, the authors opted to incorporate only the top 10% of connections. It is worth considering whether this selection might have influenced the accuracy of the results. To ensure the validity of the findings, it would be preferable to perform an analysis utilizing the top 15% or 20% of the connections.