

Aside from the very-well established role of the hippocampus in memory, the right hippocampus has been found to have a stronger FC with a distributed brain network as compared to the left hippocampus (Robinson et al., 2016). Given that the present analysis is specifically looking at inter-network FC, the right hippocampus will be the hemisphere of interest. The right caudal hippocampus was chosen over the rostral, as to investigate online memory encoding (Vorobiova et al., 2025), as measured by the NIH toolbox scores in the dataset. Aside from its function within motor and spatial tasks, the SPL has an established role in episodic memory (EM), specifically spatial EM (for a meta-analysis, see Torres-Morales & Cansino, 2023) and working memory (WM), specifically verbal WM (Marti et al., 2025). There is a lack of recent research looking at the role of specific areas of the SPL in memory, with the most recent citing the importance of area 7pc in WM tasks (for a meta-analysis, see Rottschy et al., 2011). Therefore, area 7pc of the SPL was chosen, specifically the left 7pc-SPL to allow for inter-hemispheric investigation of FC. Although research exists looking at intra- and inter-FC of the SPL (Alahmadi, 2021), the aforementioned study failed to look specifically at hippocampus-SPL FC and their communication. The present analysis will therefore investigate this research gap and provide insight into the possible role of hippocampus-SPL FC in memory.

References

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