

## Investigating the Resting State Functional Connectivity Pattern among Poets

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This research investigates the patterns of resting-state functional connectivity (FC) in poets using resting-state functional magnetic resonance imaging (RS-fMRI) to identify the neural correlates of the poet's brain. Specifically, the study examines whether poets show distinct functional activations compared to non-poets, using Independent component analysis (ICA)-based functional network (FN) analyses to compare whole-brain connectivity. The study included a total of 31 participants, consisting of 15 male poets and 16 male matched controls. On average, the poets had 18 years of professional poetry experience, producing 6.6 poems per year. Significant findings revealed enhanced connectivity across several regions, with an increase in resting FC in the bilateral putamen, caudate nucleus, paracentral lobule, anterior cingulate cortex, precentral gyrus nuclei, superior parietal lobule, insula, and occipital lobe in poets. These findings suggest specialized neural networks that enable complex cognitive functions essential for poetry, such as deep introspection, vivid sensory imagery, and advanced emotional and linguistic manipulation. This research emphasizes the significance of neural adaptations in facilitating the advanced cognitive requirements of poetic creativity. Additionally, this study explores the implications of these discoveries for comprehending the wider scope of cognitive neuroscience and artistic expression. The discussion outlines the limitations of the study and suggests future research directions, emphasizing the need for a more diverse demographic and larger sample sizes to validate and extend these findings. The ultimate goal of this research is to further integrate cognitive neuroscience with the arts, enriching both fields and providing new perspectives on the neural foundations of creativity.

**Keywords:** Poets, Resting-State fMRI, Brain Connectivity Patterns, Poetic Cognition, Artistic Expression