Title:	DynamicFunc*onalConnec*vityin theA4en*onNetworkscaptures varia*onsinAu*s*cTraitExpression
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Abstract:	Au+s+c individuals o[en experience atypicali+es in a5en+on control mechanisms, primarily with A5en+onal Focus and A5en+on Reorienta+on. These a5en+on processes are closely associated with the Le[Intraparietal Sulcus (on behalf of the Dorsal A5en+on Network) and the right anterior Temporoparietal Junc+on (on behalf of the Ventral A5en+on Network), respec+vely. The link between these two brain regions remains unclear, however, there likely exists a dynamic crosstalk between these two regions, affec+ng these a5en+on control processes. We examined the dynamic func+onal connec+vity (dFC) between the Le[Intraparietal Sulcus (Le[IPS) and the right anterior Temporoparietal Junc+on (raTPJ), as a biological marker of associa+on between A5en+onal Focus and A5en+onal Disengagement, to test its contribu+on to the manifesta+on of au+s+c trait expression in au+sm spectrum disorder (ASD). The study was conducted on a res+ng-state fMRI dataset consis+ng of 58 par+cipants (29 ASD, 29 TD), obtained from the Au+sm Brain Imaging Data Exchange (ABIDE) repository. A sliding-window analysis was performed on this dataset to iden+fy different connec+vity states (from highly nega+vely correlated to highly posi+vely correlated) followed by quan+fying FC by measuring connec+vity indices including propor+on, mean dwell +me, and probability of transi+on. We observed that au+s+c trait expression was significantly posi+vely correlated with a higher propor+on of, dwell +me in, and probability of transi+oning to, the highposi+ve correlated state in the ASD group. However, decreased SRS au+s+c expression was predicted by high-nega+ve correlated state engagement. The total number of transi+ons was nega+vely correlated with au+s+c trait expression in the ASD group. These findings provide evidence that the a5en+onal difficul+es observed in ASD are associated with altera+ons in the pa5erns of dynamic func+onal connec+vity between the brain regions responsible for a5en+onal focus and a5en+onal reorienta+on processes. 9 Keywords: Au+sm Spectrum Disorder (ASD); Dynamic Func+onal Connec+vity (dFC); A5en+onal Focus; A5en+onal Reorienta+on; Le[Intraparietal Sulcus (Le[IPS); right anterior Temporoparietal Junc+on (raTPJ).
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