***Supplementary Materials***

**Alterations of Insular Dynamic Functional Connectivity and Psychological Characteristics in Unmedicated Bipolar Depression Patients with a Recent Suicide Attempt**

**Validation results**

The validation results in 30 TRs and 70 TRs sliding window length among the three groups also showed significant differences in dFC variability between the left dAI and the left anterior cerebellar (Table S1; Fig S1); in addition, the validation results in 70 TRs showed significant differences in dFC variability between the right dAI and the right middle occipital gyrus (Table S2; Fig S1). However, there were no significant differences in static FC among the three groups using the insular as the ROIs.

**Table S1. The significant dynamic FC variability differences among three groups**

|  |  |  |  |
| --- | --- | --- | --- |
| seeds | One-way ANOVA (voxel *p* < 0.005, cluster *p* < 0.0083, GRF corrected) |  | Post-hoc analysis (Bonferroni correction, *p* < 0.05) |
| Significant regions | BA | voxels | MNI | *F* | Comparisons | *p* |  |
| x | y | z |  |
| L dAI | L anterior cerebellar lobe  | 36 | 31 | -18 | -36 | -18 | 15.264 | SA > NSASA > HCs | 0.0000.000 |  |

FC, functional connectivity; GRF, Gaussian random field; BA, Brodmann Area; MNI, Montreal Neurological coordinate; dAI, dorsal anterior insula; SA, bipolar disorder with attempted suicide; NSA, bipolar disorder without attempted suicide; L (R), left (right) hemisphere.

**Table S2. The significant dynamic FC variability differences among three groups**

|  |  |  |  |
| --- | --- | --- | --- |
| seeds | One-way ANOVA (voxel *p* < 0.005, cluster *p* < 0.0083, GRF corrected) |  | Post-hoc analysis (Bonferroni correction, *p* < 0.05) |
| Significant regions | BA | voxels | MNI | *F* | Comparisons | *p* |  |
| x | y | z |  |
| L dAIR dAI | L anterior cerebellar lobe R middle occipital Gyrus | 3619 | 3129 | -1827 | -33-78 | -1818 | 15.01810.831 | SA > NSASA > HCsSA > NSASA > HCs | 0.0000.0000.0000.000 |  |

FC, functional connectivity; GRF, Gaussian random field; BA, Brodmann Area; MNI, Montreal Neurological coordinate; dAI, dorsal anterior insula; SA, bipolar disorder with attempted suicide; NSA, bipolar disorder without attempted suicide; L (R), left (right) hemisphere.



Fig. S1 The significant dFC differences among the three groups in 30 TRs (A) and 70 TRs (B) for the insula seed (voxel p < 0.005, cluster p < 0.0083, GRF corrected). The color bar indicates the F values from One-Way ANOVA analyses. dFC, dynamic functional connectivity; GRF, Gaussian random field; vAI, ventral anterior insula; dAI, dorsal anterior insula; PI, posterior insula; L (R), left (right) hemisphere.