**Table 1.** Scanning sequences and parameters used at each center.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Center | PKUH6/HLG/XJ | HMS | HMG | RWU | ZMD |
| MRI scanner type | Vendor | Siemens | Siemens | General Electric | General Electric | General Electric |
| Model | TrioTim 3T | Verio 3T | Signa HDx 3T | Signa HDxt 3T | Signa HDxt 3T |
| MRI scan sequence and parameters | Sequence | BOLD fMRI | BOLD fMRI | BOLD fMRI | BOLD fMRI | BOLD fMRI |
| TR (ms) | 2000 | 2000 | 2000 | 2000 | 2000 |
| TE (ms) | 30 | 30 | 30 | 30 | 30 |
| Scan time (s) | 480 | 480 | 480 | 480 | 360 |
| Number of Slices | 33 | 33 | 33 | 33 | 33 |
| FA (°) | 90 | 90 | 90 | 90 | 90 |
| Orientation | Axial | Axial | Axial | Axial | Axial |
| Matrix size | 64\*64 | 64\*64 | 64\*64 | 64\*64 | 64\*64 |
| Pixel Spacing | 3.44\*3.44 | 3.44\*3.44 | 3.44\*3.44 | 3.44\*3.44 | 3.44\*3.44 |
| FOV(mm2) | 220\*220 | 220\*220 | 220\*220 | 220\*220 | 220\*220 |
| Slice Thickness (mm) | 4 | 4 | 4 | 4 | 4 |
| Gap (mm) | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| HLG Site (3.0T Siemens TrioTim) | HC (n = 55) | SZ (n = 65) | Test Statistics | *p* |
| Age (Years) | 24.89 (5.37) | 26.06 (5.38) | *T* = -1.19 | 0.24 |
| Gender (M/F) | 26/29 | 26/39 | χ2 = 0.38 | 0.54 |
| Handedness(right/left) | 55/0 | 65/0 |  |  |
| Education (Years) | 13.33 (4.59) | 13.33 (3.05) | *T* = 0.75 | 0.45 |
| Duration of illness (Months) | NA | 60.79 (49.78) | NA | NA |
| PANSS total | NA | 79.00 (6.71) | NA | NA |
| PANSS positive | NA | 26.25 (2.94) | NA | NA |
| PANSS negative | NA | 16.69 (3.37) | NA | NA |
| PANSS general | NA | 36.06 (3.85) | NA | NA |

**Table 2**．Demographic and Clinical Information (HLG).

Continuous variables represented by Mean (SD). M: male; F, female.

**Table 3.** Demographic and Clinical Information (PKUH6).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PKUH6 Site (3.0T Siemens TrioTim) | HC (n = 80) | SZ (n = 80) | Test Statistics | *p* |
| Age (Years) | 25.83 (5.44) | 27.32 (6.73) | *T* = -1.54 | 0.13 |
| Gender (M/F) | 46/34 | 50/30 | χ2 = 0.23 | 0.63 |
| Handedness(right/left) |  |  |  |  |
| Education (Years) | 13.61 (3.53) | 13.26 (3.59) | *T* = 0.63 | 0.53 |
| Duration of illness (Months) | NA | 45.88 (53.53) | NA | NA |
| PANSS total | NA | 77.92 (9.31) | NA | NA |
| PANSS positive | NA | 23.84 (4.10) | NA | NA |
| PANSS negative | NA | 18.26 (5.72) | NA | NA |
| PANSS general | NA | 35.83 (5.35) | NA | NA |

**Table 4.** Demographic and Clinical Information (WUHAN).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| WUHAN Site (3.0T Signa HDx 3T) | HC (n = 77) | SZ (n = 67) | Test Statistics | *p* |
| Age (Years) | 24.89 (5.37) | 26.06 (5.38) | *T* = -1.03 | 0.30 |
| Gender (M/F) | 37/40 | 28/39 | χ2 = 0.34 | 0.59 |
| Handedness(right/left) |  |  |  |  |
| Education (Years) | 14.60 (2.24) | 11.76 (3.55) | *T* = 5.61 | P<0.00 |
| Duration of illness (Months) | NA | 42.82 (37.09) | NA | NA |
| PANSS total | NA | 88.04 (12.08) | NA | NA |
| PANSS positive | NA | 23.69 (4.21) | NA | NA |
| PANSS negative | NA | 21.18 (6.04) | NA | NA |
| PANSS general | NA | 43.18 (7.65) | NA | NA |

**Table 5.** Demographic and Clinical Information (HMG)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| HMG Site (3.0T Signa HDx 3T) | HC (n = 66) | SZ (n = 43) | Test Statistics | *p* |
| Age (Years) | 30.75 (7.28) | 29.24 (7.81) | *T* = 1.01 | 0.31 |
| Gender (M/F) | 32/34 | 24/19 | χ2 = 0.30 | 0.58 |
| Handedness(right/left) |  |  |  |  |
| Education (Years) | 13.08 (4.51) | 9.14 (3.42) | *T* = 5.17 | 0.00 |
| Duration of illness (Months) | NA | 51.00 (62.52) | NA | NA |
| PANSS total | NA | 88.70 (11.91) | NA | NA |
| PANSS positive | NA | 24.44 (3.65) | NA | NA |
| PANSS negative | NA | 23.60 (5.57) | NA | NA |
| PANSS general | NA | 40.65 (6.55) | NA | NA |

**Table 6.** Demographic and Clinical Information (HMS).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| HMS Site (3.0T Siemens Verio 3T) | HC (n = 80) | SZ (n = 80) | Test Statistics | *p* |
| Age (Years) | 27.16 (5.70) | 26.09 (5.36) | *T* = 1.23 | 0.22 |
| Gender (M/F) | 42/38 | 43/37 | χ2 = 0.00 | 1.00 |
| Handedness(right/left) |  |  |  |  |
| Education (Years) | 13.82 (2.85) | 11.13 (2.83) | *T* = 5.96 | <0.00 |
| Duration of illness (Months) | NA | 39.92 (38.80) | NA | NA |
| PANSS total | NA | 81.12 (8.52) | NA | NA |
| PANSS positive | NA | 22.54 (2.80) | NA | NA |
| PANSS negative | NA | 19.52 (5.33) | NA | NA |
| PANSS general | NA | 39.06 (5.46) | NA | NA |

**Table 7.** Demographic and Clinical Information (ZMD).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ZMD Site (3.0T Signa HDx 3T) | HC (n = 53) | SZ (n = 53) | Test Statistics | *p* |
| Age (Years) | 33.29 (7.09) | 31.03 (7.38) | *T* = 1.61 | 0.11 |
| Gender (M/F) | 24/29 | 26/27 | χ2 = 0.04 | 0.85 |
| Handedness(right/left) |  |  |  |  |
| Education (Years) | 12.87 (3.31) | 8.71 (3.60) | *T* = 6.16 | <0.00 |
| Duration of illness (Months) | NA | 64.95 (64.14) | NA | NA |
| PANSS total | NA | 87.47 (13.67) | NA | NA |
| PANSS positive | NA | 25.43 (5.09) | NA | NA |
| PANSS negative | NA | 21.04 (5.76) | NA | NA |
| PANSS general | NA | 41.00 (6.40) | NA | NA |

**Table 8.** Demographic and Clinical Information (XJ).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| XJ Site (3.0T Siemens TrioTim) | HC (n = 40) | SZ (n = 58) | Test Statistics | *p* |
| Age (Years) | 29.74 (6.36) | 27.54 (5.95) | *T* = 1.73 | 0.09 |
| Gender (M/F) | 21/19 | 30/28 | χ2 = 0.00 | 1.00 |
| Handedness(right/left) |  |  |  |  |
| Education (Years) | 13.00 (3.19) | 10.05 (4.81) | *T* = 3.65 | <0.00 |
| Duration of illness (Months) | NA | 25.98 (29.78) | NA | NA |
| PANSS total | NA | 88.95 (14.07) | NA | NA |
| PANSS positive | NA | 22.34 (4.91) | NA | NA |
| PANSS negative | NA | 22.31 (5.73) | NA | NA |
| PANSS general | NA | 44.29 (8.02) | NA | NA |

**Table 9.** Wilcoxon rank sum test of maximum displacement and maximum rotation of the imaging data from HCs and SZs.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Maximum displacement |  |  | Maximum rotation |  |
| Test Statistics | *p* |  | Test Statistics | *p* |
| HLG | 1860.50 | 0.70 |  | 1826.00 | 0.84 |
| PKUH6 | 2953.00 | 0.40 |  | 2752.00 | 0.13 |
| WUHAN | 2552.50 | 0.92 |  | 2898.50 | 0.20 |
| HMG | 1371.00 | 0.77 |  | 1494.00 | 0.64 |
| HMS | 2506.00 | 0.02 |  | 2953.00 | 0.40 |
| ZMD | 1523.00 | 0.46 |  | 1357.00 | 0.77 |
| XJ | 1215.00 | 0.69 |  | 1133.00 | 0.85 |

|  |  |  |  |
| --- | --- | --- | --- |
| Anatomical location | MNI coordinates | | |
| x | y | z |
| Left posterior medial frontal cortex (pre-SMA) | 0 | 14 | 52 |
| Right posterior medial frontal cortex | 6 | 24 | 42 |
| Left intraparietal sulcus/intraparietal cortex (IPS) | -44 | -40 | 42 |
| Left anterior insular (AI) | -36 | 22 | -2 |
| Left inferior frontal gyrus pars opercularis | -46 | 10 | 26 |
| Left IFG/caudal lateral prefrontal gyrus | -46 | 30 | 20 |
| Right anterior insular | 38 | 24 | 4 |
| Right caudal lateral prefrontal cortex | 34 | 44 | 26 |
| Right inferior frontal gyrus pars opercularis | 50 | 16 | 26 |
| Right intraparietal sulcus | 30 | -60 | 50 |

**Table 10.** Anatomical location of the ROIs.

**Table 11**. Association analysis of FC1 and clinical scores in patients.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | PANSS total | |  | PANSS positive | |  | PANSS negative | |  | PANSS general | |
| r | p |  | r | p |  | r | p |  | r | p |
| HLG |  |  |  |  |  |  |  |  |  |  |  |
| PKUH6 |  |  |  |  |  |  |  |  |  |  |  |
| WUHAN |  |  |  |  |  |  |  |  |  |  |  |
| HMG |  |  |  |  |  |  |  |  |  |  |  |
| HMS |  |  |  |  |  |  |  |  |  |  |  |
| ZMD |  |  |  |  |  |  |  |  |  |  |  |
| XJ |  |  |  |  |  |  |  |  |  |  |  |
| ALL | 0.08 | 0.11 |  | 0.07 | 0.13 |  | 0.04 | 0.44 |  | 0.05 | 0.31 |