**Supplementary Material**

Gao YX, Shuai DD, et al. Impairments of Large-Scale Functional Networks in Attention-Deficit/Hyperactivity Disorder: A Meta-Analysis of Resting-State Functional Connectivity

**Table S1. Summary of Methodological Information of Studies Included in Meta-analysis**

**Table S2. Summary of Seed-Networks and Seed ROIs of Studies Included in Meta-analysis**

**Table S3. Results of Meta-analysis of All Samples: rsFC differences between ADHD and TD controls**

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**Table S5. Results of Subgroup Analysis of Non-Adult Samples: rsFC differences between ADHD and TD controls**

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**Figure S1. Meta-analysis of abnormal resting-state functional connectivity (rsFC) in Non-Adult Samples**

**Figure S2. A funnel plot of the meta-analysis**

**References. Articles included in the meta-analysis**

This material has been provided by the authors to give readers additional information

**Table S1. Summary of Methodological Information of Studies Included in Meta-analysis**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Study** | **Scanner** | **Scan****Duration** | **TR/TE****(ms/ms)** | **Eyes** | **Preprocessing** **Nuisance Regressors** | **Motion Inclusion Criteria** | **Software** | **Seed Type** |
| Tian et al., 2006 | 3.0T Siemens | 8min | 2000/30 | Closed | NA | 1mm | SPM2, AFNI | mask  |
| Cao et al., 2009 | 3.0T Siemens | 8min | 2000/30 | Closed | 6 MP, CSF, WM, GS | 3mm or 3° | SPM5, REST | mask |
| Mennes et al., 2012 | 3.0T Siemens | 6.5min | 2000/25 | Open  | 6 MP, CSF, WM, GS | 4mm | AFNI, FSL | 4mm sphere |
| Mills et al., 2012 | 3.0T | NA | NA | Both | 6 MP, CSF, WM, GS | 1.5mm RMS | NA | mask |
| Sun et al., 2012 | 3.0T Siemens | 8min | 2000/30 | Closed  | 6 MP, CSF, WM, GS | 3mm or 3° | SPM5, REST, AFNI | mask  |
| Costa Dias et al., 2013 | 3.0T Siemens | 3\*3.5min | 2500/30 | Open  | 6 MP, CSF, WM, GS | 1.5mm RMS | FSL | mask  |
| McCarthy et al., 2013 | 3.0T Philips | 7.2min | 2000/28 | NA | WM, CSF, motion component | 3mm or 3° | SPM8, CONN | 5mm sphere |
| Posner et al., 2013 | 3.0T GE | 2\*5min | 2200/30 | Closed | 6 MP, WM, ventricles | 1.5mm RMS | SPM8, CONN | 5mm sphere,  |
|  |  |  |  |  | head motion velocity |  |  | mask |
| Hoekzema et al., 2014 | 1.5T GE | 4min | 3000/60 | Open  | 6 MP, CSF, WM  | 3mm or 3° | SPM8, GIFT, CONN | mask  |
| Karalunas et al., 2014 | 3.0T Siemens | 7-10min | 2500/30 | Open  | 6 MP, CSF, WM, GS | 1.5mm RMS | FSL | mask  |
| Li et al., 2014 | 3.0T Siemens | 6min 40s | 2000/30 | Closed  | 6 MP, CSF, WM, GS | 2mm or 2° | SPM8 | mask  |
| McLeod et al., 2014 | 3.0T GE | 5min | 2000/30 | Open | 6 MP, CSF, WM, GS | NA | FSL | mask |
| Posner et al., 2014 | 3.0T GE | 2\*5min | 2000/30 | Closed | No | NA (4 excluded) | SPM8, CONN | mask  |
| Hong et al., 2015 | 3.0T Siemens | 6min 24s | 3000/40 | Closed  | 6 MP, CSF, WM, GS | 2mm or 2° | SPM8 | 3.5mm sphere |
| Kucyi et al., 2015 | 3.0T Siemens | 10min 8s | 3340/30 | Open  | 6 MP, CSF, WM  | NA | FSL, fMRISTAT | mask  |
| Lin et al., 2015 | 3.0T Siemens | 6min | 2000/24 | Closed  | Friston-24, CSF, WM, GS | 1mm Max FD | DPARSF, CONN | 4mm sphere |
| Lin et al., 2016 | 3.0T Siemens | 6min | 2000/24 | Closed | 6 MP, CSF, WM, outliers | 1.5mm or 1.5°, FD>0.5mm | SPM8, REST | 5mm sphere |
| Oldehinkel et al., 2016 | 1.5T Siemens | 8min | 1960/40 | Open  | CSF, WM | RMS-FD>0.5mm | FSL | mask |
| Uytun et al., 2016 | 1.5T Siemens | 9min 44s | 2800/25 | Closed  | NA | 0.3mm or 0.3° | SPM | mask  |
| Mizuno et al., 2017 | 3.0T GE | 7min 42s | 2300/30 | Closed | Friston-24, CSF, WM | 2mm or 2°, FD>0.5mm | SPM12 | mask |
| Zhao et al., 2017 | 3.0T Siemens | NA | 2000/30 | Closed  | 12 MP, CSF, WM, GS | 3mm or 3° | DPABI | 6mm sphere |

TR=repetition time; TE=echo time; MP= motion parameters; CSF=cerebrospinal fluid; WM= white matter; GS= global signal; RMS=root mean square; FD=framewise displacement; SPM=Statistical Parametric Mapping; AFNI=Analysis of Functional NeuroImages; CONN=Functional Connectivity Toolbox; DPARFS=Data Processing Assistant for Resting-State fMRI; DPABI: Data Processing & Analysis for Brain Imaging; fMRISTAT=a MATLAB toolbox for the statistical analysis of fMRI data; FSL=FMRIB Software Library; GIFT: Group ICA of fMRI Toolbox; REST=Resting-State fMRI Data Analysis Toolkit.

**Table S2. Summary of Seed-Networks and Seed ROIs of Studies Included in Meta-analysis**

|  |  |
| --- | --- |
| **Reference** | **Seed-Networks and Direction of Effects** |
| **DMN** | **FPN** | **AN** | **VAN** | **SSN** | **DAN** | **Visual** |
| **ADHD****>TD** | **ADHD****<TD** | **No****Sig** | **ADHD****>TD** | **ADHD****<TD** | **No****Sig** | **ADHD****>TD** | **ADHD****<TD** | **No****Sig** | **ADHD****>TD** | **ADHD****<TD** | **No****Sig** | **ADHD****>TD** | **ADHD****<TD** | **No****Sig** | **ADHD****>TD** | **ADHD****<TD** | **No****Sig** | **ADHD****>TD** | **ADHD****<TD** | **No****Sig** |
| Tian et al., 2006 |  |  |  | ACC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cao et al., 2009 |  |  |  |  |  |  |  |  |  | Putam | Putam |  |  |  |  |  |  |  |  |  |  |
| Mennes et al., 2012 | Caud | Caud |  | FOSMG | FO | ACC |  |  |  |  |  | Insula |  |  |  |  |  |  |  |  | MOG |
| Sun et al., 2012 |  |  |  | ACC | ACC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| McCarthy et al., 2013 | Precu |  |  | DLPFC | DLPFC |  |  |  |  |  | TPJVFC |  |  |  |  | FEF | IPS |  |  |  |  |
| Costa Dias et al., 2013 |  |  |  |  |  |  | NAcc | NAcc |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Posner et al., 2013 |  |  |  | DLPFC | DLPFC |  | VS | VS |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Karalunas et al., 2014a |  |  |  |  |  |  | Amyg | Amyg |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Karalunas et al., 2014b |  |  |  |  |  |  | Amyg | Amyg |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Karalunas et al., 2014c |  |  |  |  |  |  |  | Amyg |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hoekzema et al.,2014 |  |  |  |  |  | DLPFC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Li et al., 2014 |  |  |  | SFG | SFG |  | OFC | OFC |  |  |  |  |  |  |  |  |  |  |  |  |  |
| McLeod et al., 2014a |  |  |  |  |  |  |  |  |  |  |  |  |  | PMC |  |  |  |  |  |  |  |
| McLeod et al., 2014b |  |  |  |  |  |  |  |  |  |  |  |  |  | PMC |  |  |  |  |  |  |  |
| Posner et al., 2014 | Hippo | Hippo |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hong et al., 2015 |   | Caud |  |  |  |  |  |  | NAcc |  | Putam |  |  |  |  |  |  |  |  |  |  |
| Kucyi et al., 2015 | Cerebll |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lin et al., 2015 |  |  |  |  | aPFC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lin et al., 2016 |  | Precu | PCCmPFC | DLPFC |  |  |  |  |  |  |  | TPJVFC |  |  |  |  | FEF | IPS |  |  |  |
| Uytun et al., 2016a | PCCMPFC |  |  | SMGACC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Uytun et al., 2016b | PCCIPL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Oldehinkel et al., 2016 |  |  | Caud |  |  | Caud |  |  | NAcc |  |  | Putam  |  |  | Putam  |  |  |  |  |  |  |
| Mizuno et al., 2017 |  | Cerebll  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Zhao et al., 2017 |  |  |  |  |  |  |  |  |  | Insula | Insula |  |  |  |  |  |  |  |  |  |  |
| **Total datasets** | 6 | 5 | 2 | 8 | 6 | 2 | 5 | 6 | 2 | 2 | 4 | 3 | 0 | 2 | 1 | 1 | 2 | 1 | 0 | 0 | 1 |
| **10** | **11** | **8** | **7** | **3** | **3** | **1** |

ROIs=regions of interest; DMN=default mode network; VAN=ventral attention network, DAN=dorsal attention network; FPN=frontoparietal network; SSN=somatosensory network; AN=affective network; ACC=anterior cingulate cortex; Putam=putamen; Caud=caudate; FO=frontal operculum; SMG=supramarginal gyrus; NAcc=nucleus accumbens; Precu=precuneus; TPJ=temporoparietal junction; VFC=ventral frontal cortex; FEF=frontal eye field; IPS=intraparietal sulcus; DLPFC=dorsolateral prefrontal cortex; VS=ventral striatum; Amyg=amygdala; SFG=superior frontal gyrus; OFC= orbitofrontal cortex; PMC=primary motor cortex; Hippo=hippocampus; Cerebll=cerebellum; aPFC=anterior prefrontal cortex; PCC=posterior cingulate cortex; MPFC=medial prefrontal cortex; IPL=inferior parietal lobe; MTG=middle temporal gyrus; IFC=inferior frontal cortex; Temp=temporopolar area; STG=superior temporal gyrus; FG=fusiform gyrus; No Sig=No significance.

**Table S3. Results of Meta-analysis of All Samples: rsFC differences between ADHD and TD**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Seed-Network** | **MNI** **coordinates** | **SDM** ***Z*-value** | ***P*-value** | **No. of****voxels** | **Breakdown (No. of voxels)** |
| **DMN (No. of datasets: 10)** |  |  |  |  |  |
|  *Hyperconnectivity (ADHD>TD)* |  |  |  |  |  |
|  Right SMG extending to AG, BA 40 | 62, -48, 38 | 1.217 | 0.00027 | 451 | Right SMG, BA 22, 40, 42, 48 (217) |
|  |  |  |  |  | Right angular gyrus, BA 22, 39, 40, 48 (139) |
|  |  |  |  |  | Right inferior parietal gyri, BA 39, 40 (93) |
|  Left STG, BA 38 | -34, 10, -28 | 1.039 | 0.00074 | 248 | Left temporal pole/STG, BA 20, 28, 34, 36, 38 (184) |
|  |  |  |  |  | Left temporal pole/MTG, BA 20, 38 (18) |
|  *Hypoconnectivity (ADHD<TD)* |  |  |  |  |  |
|  Left MFG, BA 9 | -34, 14, 50 | -1.537 | 0.00002 | 584 | Left MFG, BA 6, 8, 9, 44, 46 (343) |
|  |  |  |  |  | Left precentral gyrus, BA 6, 9, 44 (159) |
|  |  |  |  |  | Left IFG, opercular part, BA 44, 48 (15) |
|  Right SCC, BA 25 | 2, 12, -4 | -1.397 | 0.00010 | 540 | Right striatum (106) |
|  |  |  |  |  | Left caudate nucleus, BA 25 (62) |
|  |  |  |  |  | Left olfactory cortex, BA 25 (60) |
|  |  |  |  |  | Right olfactory cortex, BA 11, 25 (53) |
|  |  |  |  |  | Left striatum (18) |
|  |  |  |  |  | Right caudate nucleus, BA 25 (18) |
| **FPN (No. of datasets: 11)** |  |  |  |  |  |
|  *Hyperconnectivity (ADHD>TD)* |  |  |  |  |  |
|  Left OFC, BA 11 | -8, 64, -20 | 1.055 | 0.00102 | 372 | Left SFG, orbital part, BA 11 (121) |
|  |  |  |  |  | Left SFG, medial orbital, BA 10, 11 (119) |
|  |  |  |  |  | Left gyrus rectus, BA 11 (42) |
|  *Hypoconnectivity (ADHD<TD)* |  |  |  |  |  |
|  Right putamen, BA 48 | 30, -4, 0 | -1.533 | 0.00018 | 925 | Right putamen/lenticular nucleus, BA 11, 47, 48 (452) |
|  |  |  |  |  | Right striatum (158) |
|  |  |  |  |  | Right insula, BA 48 (53) |
|  Left insula | -38, -10, 8 | -1.334 | 0.00078 | 581 | Left insula, BA 48 (242) |
|  |  |  |  |  | Left rolandic operculum, BA 48 (97) |
|  |  |  |  |  | Left lenticular nucleus/ putamen, BA 48 (82) |
|  |  |  |  |  | Left heschl gyrus, BA 48 (29) |
|  |  |  |  |  | Left striatum (21) |
|  Left precentral gyrus | -38, -6, 56 | -1.251 | 0.00119 | 152 | Left precentral gyrus, BA 6 (151) |
|  |  |  |  |  | Left SFG, dorsolateral (1) |
|   |  |  |  |  |  |
|  Right precentral gyrus | 38, -18, 48 | -1.143 | 0.00194 | 119 | Right precentral gyrus, BA 4, 6 (78) |
|  |  |  |  |  | Right postcentral gyrus, BA 3, 4 (10) |
| **AN (No. of datasets: 8)** |  |  |  |  |  |
|  *Hyperconnectivity (ADHD>TD)* |  |  |  |  |  |
|  Left DLPFC, BA 11 | -22, 60, 0 | 1.366 | 0.00009 | 444 | Left SFG, orbital part, BA 10, 11 (141) |
|  |  |  |  |  | Left SFG, dorsolateral, BA 10, 11 (104) |
|  |  |  |  |  | Left MFG, BA 10, 11 (96) |
|  |  |  |  |  | Left MFG, orbital part, BA 10, 11, 47 (57) |
|  Left MFG/precentral gyrus, BA 6 | −42, 2, 48 | 1.088 | 0.00085 | 202 | Left precentral gyrus, BA 6, 9 (123) |
|  |  |  |  |  | Left MFG, BA 6, 9 (77) |

DMN=default mode network; FPN=frontoparietal network; AN=affective network; ADHD=attention-deficit/hyperactivity disorder; TD=typically developing; BA=Brodmann area; IPL=inferior parietal lobe; SMG=supramarginal; gyrus; SFG=superior frontal gyrus; MFG= middle frontal gyrus; STG=superior temporal gyrus.

**Table S4. Results of Jackknife Sensitivity Analysis of All Samples**

|  |  |
| --- | --- |
| **Discarded datasets** | **Seed-Networks and Effect Regions** |
| DMN | FPN | AN |
| RightSMG/AG | Left STG | LeftMFG | RightSCC | Left OFC | Right putamen | Leftinsula | Left precentral gyrus | Rightprecentral gyrus | Left DLPFC | Left MFG |
| Excluding Tian |  |  |  |  | Yes | Yes | Yes | Yes | Yes |  |  |
| Excluding Mennes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |
| Excluding Sun |  |  |  |  | Yes | Yes | Yes | Yes | Yes |  |  |
| Excluding Costa Dias |  |  |  |  |  |  |  |  |  | No | No |
| Excluding McCarthy | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Excluding Posner (2013) |  |  |  |  | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Excluding Karalunas a |  |  |  |  |  |  |  |  |  | Yes | Yes |
| Excluding Karalunas b |  |  |  |  |  |  |  |  |  | Yes | Yes |
| Excluding Karalunas c |  |  |  |  |  |  |  |  |  | Yes | Yes |
| Excluding Li |  |  |  |  | No | No | No | No | No | Yes | Yes |
| Excluding Posner (2014) | No | No | Yes | No |  |  |  |  |  |  |  |
| Excluding Hong | Yes | Yes | Yes | Yes |  |  |  |  |  | Yes | Yes |
| Excluding Kucyi | Yes | Yes | Yes | Yes |  |  |  |  |  |  |  |
| Excluding Lin (2015) |  |  |  |  | Yes | Yes | Yes | Yes | Yes |  |  |
| Excluding Lin (2016) | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |
| Excluding Uytun a | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |
| Excluding Uytun b | Yes | Yes | Yes | Yes |  |  |  |  |  |  |  |
| Excluding Mizuno | Yes | Yes | Yes | Yes |  |  |  |  |  |  |  |
| Excluding Hoekzema |  |  |  |  | Yes | Yes | Yes | Yes | Yes |  |  |
| Excluding Oldehinkel | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

DMN=default mode network; FPN=frontoparietal network; AN=affective network; IPL=inferior parietal lobe; SFG=superior frontal gyrus; MFG= middle frontal gyrus;

STG=superior temporal gyrus.

**Table S5. Results of Subgroup Analysis of Non-adult Sample: rsFC differences between ADHD and TD**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Seed-Network** | **MNI** **coordinates** | **SDM** ***Z*-value** | ***P*-value** | **No. of****voxels** | **Breakdown (No. of voxels)** |
| **DMN (No. of datasets: 7)** |  |  |  |  |  |
|  *Hyperconnectivity (ADHD>TD)* |  |  |  |  |  |
|  Right SMG extending to AG, BA 40 | 60, -48, 36 | 1.348 | 0.00033 | 473 | Right SMG, BA 22, 40, 42, 48 (215) |
|  |  |  |  |  | Right angular gyrus, BA 22, 39, 40, 48 (157) |
|  |  |  |  |  | Right inferior parietal gyri, BA 39, 40 (94) |
|  Left STG, BA 38 | -34, 10, -28 | 1.052 | 0.00174 | 215 | Left temporal pole/STG, BA 20, 28, 36, 38 (169) |
|  |  |  |  |  | Left temporal pole/MTG, BA 20, 38 (14) |
|  Left insula, BA 48 | -40, 12, 4 | 1.034 | 0.00201 | 109 | Left insula, BA 47, 48 (98) |
|  |  |  |  |  | Left IFG, BA 48 (9) |
|  Right insula | 48, 18, -6 | 1.036 | 0.00199 | 104 | Right insula, BA 38, 47, 48 (39) |
|  |  |  |  |  | Right IFG, orbital part (27) |
|  |  |  |  |  | Right IFG, opercular part (10) |
|  Left STG, BA 22 | -62, -26, 8 | 1.003 | 0.00262 | 104 | Left STG, BA 21, 22, 42, 48 (87) |
|  |  |  |  |  | Left MTG, BA 21, 22 (7) |
|  *Hypoconnectivity (ADHD<TD)* |  |  |  |  |  |
|  Left MFG, BA 9 | -34, 14, 50 | -1.560 | 0.00002 | 612 | Left MFG, BA 6, 8, 9, 44, 46 (356) |
|  |  |  |  |  | Left precentral gyrus, BA 6, 9, 44 (168) |
|  |  |  |  |  | Left IFG, opercular part, BA 44, 48 (17) |
|  Right SCC, BA 25 | 2, 12, -6 | -1.486 | 0.00006 | 605 | Right striatum (131) |
|  |  |  |  |  | Left olfactory cortex, BA 25 (71) |
|  |  |  |  |  | Left caudate nucleus, BA 25 (64) |
|  |  |  |  |  | Right olfactory cortex, BA 11, 25 (56) |
|  |  |  |  |  | Left striatum (25) |
|  |  |  |  |  | Right caudate nucleus, BA 25 (19) |
|  Right MPFC, BA 10 | 10, 58, 26 | -1.053 | 0.00092 | 101 | Right SFG, medial, BA 9, 10 (72) |
|  |  |  |  |  | Right SFG, dorsolateral, BA 9, 10 (24) |
| **FPN (No. of datasets: 8)** |  |  |  |  |  |
|  *Hyperconnectivity (ADHD>TD)* |  |  |  |  |  |
|  Left OFC, BA 11 | -4, 66, -20 | 1.045 | 0.00160 | 368 | Left SFG, orbital part, BA 11 (120) |
|  |  |  |  |  | Left SFG, medial orbital, BA 10, 11 (117) |
|  |  |  |  |  | Left gyrus rectus, BA 11 (42) |
|  Right ACC, BA 32 | 10, 30, 24 | 1.110 | 0.00111 | 126 | Right AC/paracingulate gyri, BA 24, 32 (103) |
|  |  |  |  |  | Right median network, cingulum (20) |
|  *Hypoconnectivity (ADHD<TD)* |  |  |  |  |  |
|  Right putamen | 30, -2, -2 | -1.552 | 0.00024 | 1089 | Right lenticular nucleus/putamen, BA 11, 47, 48 (477) |
|  |  |  |  |  | Right striatum (182) |
|  |  |  |  |  | Right insula, BA 47, 48 (89) |
|  Left insula | -40-8, 8 | -1.438 | 0.00077 | 764 | Left insula, BA 48 (294) |
|  |  |  |  |  | Left lenticular nucleus, putamen, BA 48 (98) |
|  |  |  |  |  | Left heschl gyrus, BA 48 (43) |
|  |  |  |  |  | Left STG, BA 48 (10) |
|  Left precentral gyrus, BA 6 | -38, -8, 56 | -1.356 | 0.00128 | 235 | Left precentral gyrus, BA 6 (212) |
|  |  |  |  |  | Left postcentral gyrus, BA 6 (21) |
|  Right precentral gyrus, BA 4 | 40, -20, 48 | -1.209 | 0.00243 | 118 | Right precentral gyrus, BA 3, 4, 6 (82) |
|  |  |  |  |  | Right postcentral gyrus, BA 3, 4 (27) |
| **AN (No. of datasets: 8)** |  |  |  |  |  |
|  *Hyperconnectivity (ADHD>TD)* |  |  |  |  |  |
|  Left DLPFC, BA 11 | -22, 60, 0 | 1.366 | 0.00009 | 444 | Left SFG, orbital part, BA 10, 11 (141) |
|  |  |  |  |  | Left SFG, dorsolateral, BA 10, 11 (104) |
|  |  |  |  |  | Left MFG, BA 10, 11 (96) |
|  |  |  |  |  | Left MFG, orbital part, BA 10, 11, 47 (57) |
|  Left MFG/precentral gyrus, BA 6 | −42, 2, 48 | 1.088 | 0.00085 | 202 | Left precentral gyrus, BA 6, 9 (123) |
|  |  |  |  |  | Left MFG, BA 6, 9 (77) |

DMN=default mode network; FPN=frontoparietal network; AN=affective network; ADHD=attention-deficit/hyperactivity disorder; TD=typically developing; BA=Brodmann area; SMG=supramarginal gyrus; SFG=superior frontal gyrus; MFG= middle frontal gyrus; STG=superior temporal gyrus; AC=anterior cingulate; IFG=inferior frontal gyrus.

**Table S6. Results of Jackknife Sensitivity Analysis of Non-Adult Samples**

|  |  |
| --- | --- |
| **Discarded datasets** | **Seed-Networks and Effect Regions** |
| DMN | FPN |
| RightSMG/AG  | Left STG | Left insula | Right insula | Left STG | LeftMFG | RightSCC | RightMPFC | Left OFC | Right ACC | Right putamen | Leftinsula | Left precentral gyrus | Rightprecentral gyrus |
| Excluding Tian |  |  |  |  |  |  |  |  | Yes | No | Yes | Yes | Yes | Yes |
| Excluding Mennes | Yes | Yes | No | No | No | Yes | No | Yes | Yes | No | Yes | Yes | Yes | Yes |
| Excluding Sun |  |  |  |  |  |  |  |  | Yes | Yes | Yes | Yes | Yes | Yes |
| Excluding Costa Dias |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Excluding Posner (2013) |  |  |  |  |  |  |  |  | Yes | Yes | Yes | Yes | Yes | Yes |
| Excluding Li |  |  |  |  |  |  |  |  | No | Yes | Yes | No | No | No |
| Excluding Posner (2014) | No | No | Yes | Yes | Yes | Yes | Yes | No |  |  |  |  |  |  |
| Excluding Hong | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |  |  |  |  |
| Excluding Lin (2015) |  |  |  |  |  |  |  |  | Yes | Yes | Yes | Yes | Yes | Yes |
| Excluding Uytun a | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Excluding Uytun b | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |  |  |  |  |
| Excluding Mizuno | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |  |  |  |  |  |  |
| Excluding Oldehinkel | Yes | Yes | No | No | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

DMN=default mode network; FPN=frontoparietal network; AN=affective network; IPL= inferior parietal lobe; MPFC=medial prefrontal cortex; SFG=superior frontal gyrus; MFG= middle frontal gyrus; STG=superior temporal gyrus.



**Figure S1.** **Meta-analysis of abnormal resting-state functional connectivity (rsFC) in Non-Adult ADHD Samples.** A. Default mode network (DMN) seeds show increased and decreased connectivity with regions of the DMN, ventral attention (VAN), frontoparietal (FPN), somatosensory (SSN) and affective network (AN). B. Shown hypoconnectivity between FPN seeds and regions of the VAN, SSN and dorsal attention network (DAN) along with hyperconnectivity within FPN as well as between FPN and AN. MFG, middle frontal gyrus; STG, superior temporal gyrus; MPFC, medial prefrontal cortex; SFG, superior frontal gyrus; IPL, inferior parietal lobe; ACC, anterior cingulate cortex.



**Figure S2. A funnel plot of the meta-analysis.** Each dot represents a study; the y-axis represents the standard error which shows the study precision and the x-axis represents the effect size of the study's result.