

**Table 1: Demographic and clinical characteristics of the participants in 18 DTI with TBSS studies (22 data sets) included in the meta-analysis**

| Study                        | Subjects, n<br>(females) |        | Age, years |      | Age at<br>onset,<br>years | Illness<br>duration,<br>years | Severity<br>(scale<br>type)  | Diagnosis           | Statistical<br>threshold            | Drug states                               | Mood<br>States               | Comorbidity | Quality<br>scores |
|------------------------------|--------------------------|--------|------------|------|---------------------------|-------------------------------|------------------------------|---------------------|-------------------------------------|---|------------------------------|-------------|-------------------|
|                              | BD                       | HC     | BD         | HC   |                           |                               |                              |                     |                                     |   |                              |             |                   |
| Ambrosi et al.(2016a)        | 25(12)                   | 50(24) | 48.6       | 48.3 | NA                        | 20.3                          | 9.2<br>(HAMD)                | BDI                 | P<0.008(<br>multiple<br>comparison) | 10 AD, 16 AP, 11 EP, 16<br>Li, 6 BDZ.     | NA                           | NA          | 11.5              |
| Ambrosi et al.(2016b)        | 25(12)                   | 50(24) | 48.3       | 48.3 | NA                        | 23.9                          | 14.5<br>(HAMD)               | BDII                | P<0.008(<br>multiple<br>comparison) | 6 AD, 12 AP, 14 AE, 10<br>Li, 13 BDZ.     | NA                           | NA          | 11.5              |
| Versace et al.(2008)         | 31(20)                   | 25(14) | 35.9       | 29.5 | 25.4                      | 12.3                          | RBP2.1,<br>DBP15.2<br>(HAMD) | BDI                 | P<0.05<br>(multiple<br>comparison)  | 5 Li, 12 MS, 8 AP, 7 AD,<br>7 BDZ.        | Euthymic 17,<br>Depressed 14 | NA          | 11.5              |
| Kumar et al.(2014)           | 22(7)                    | 41(11) | 34.7       | 33.2 | NA                        | 10.7                          | 8.57<br>(SSPI)               | BD                  | P<0.05(TFC<br>E)                    | 55 on medications<br>including AP and MS. | NA                           | NA          | 11                |
| Delaloye et al.(2011)        | 15(?)                    | 15(?)  | 67.9       | 68.3 | 34.1                      | 33.8                          | 1.00<br>(YMRS)               | BD                  | P<0.05(TFC<br>E)                    | 10 MS, 3 AD, 6 BDZ, 4<br>NL.              | Euthymic                     | NA          | 10.5              |
| Haller et al.(2011)          | 19(14)                   | 47(22) | 68.5       | 69.8 | 39.4                      | 29.2                          | 0.95<br>(YMRS)               | BDI<br>BDII         | P<0.05(TFC<br>E)                    | 15 MS, 5 AP, 7 BDZ, 5<br>NL, 3 UM.        | Euthymic                     | NA          | 11.5              |
| Benedetti FREE et al. (2011) | 26(17)                   | 21(10) | 45.1       | 39.9 | 31.6                      | 13.5                          | 20.1<br>(HAMD)               | BDI                 | P<0.05(TFC<br>E)                    | 26 UM.                                    | Depressed                    | NA          | 11                |
| Benedetti TREAT et al.(2011) | 14(11)                   | 21(10) | 47.8       | 39.9 | 31.1                      | 17.6                          | 19.1<br>(HAMD)               | BDI                 | P<0.05(TFC<br>E)                    | 14 Li.                                    | Depressed                    | NA          | 11                |
| Chan et al. (2010)           | 16(4)                    | 16(4)  | 36.9       | 37.3 | NA                        | 0.2                           | 3.8<br>(YMRS )               | BDI                 | P<0.001(unc<br>orrected)            | 6 Li, 7 MS (sodium<br>valproate), 12 AP.  | Euthymic                     | NA          | 11                |
| Lagopoulos et al.(2013)      | 58(41)                   | 40(24) | 23.0       | 24.1 | 15.4                      | 7.5                           | 13.4<br>(HAMD)               | BDI,II<br>,spectrum | P<0.05(FW<br>E)                     | 25 AD, 23 MS, 37 AP, 8<br>UM.             | Depressed                    | NA          | 11.5              |
| Mahon SU et al.(2012)        | 14(5)                    | 15(7)  | 33.3       | 33.7 | 20.8                      | 12.5                          | 6.8<br>(HAMD)                | BDI                 | P<0.05(FW<br>E)                     | 10 MS, 6 AP, 3 UM.                        | NA                           | YES         | 10.5              |
| Mahon NSU et al.(2012)       | 15(6)                    | 15(7)  | 36.5       | 33.7 | 24.8                      | 11.7                          | 5.4<br>(HAMD)                | BDI                 | P<0.05(FW<br>E)                     | 14 AP, 14 MS.                             | NA                           | YES         | 10.5              |
| Sprooten et al.(2013)        | 64(46)                   | 46(31) | 31.7       | 30.1 | 18.0                      | 10.0                          | 2.0<br>(HAMD)                | BDI                 | P<0.05(FW<br>E)                     | 34 MS,28 AD, 23 AP, 12<br>Li, 11 UM       | Euthymic                     | YES         | 12                |
| Versace et al.(2010)         | 15(14)                   | 24(15) | 36.3       | 27.7 | 21.6                      | 14.7                          | 14.9<br>(HAMD)               | BDI                 | P<0.05(TFC<br>E)                    | 10 MS, 10 AP, 8 AP, 6<br>BDZ.             | Depressed                    | NA          | 11.5              |

|                          |        |        |      |      |      |      |                                  |                           |                     |                                  |                                     |     |      |
|--------------------------|--------|--------|------|------|------|------|----------------------------------|---------------------------|---------------------|----------------------------------|-------------------------------------|-----|------|
| Wessa et al.(2009)       | 22(11) | 21(9)  | 45.4 | 43.0 | 23.0 | 22.0 | 0.1 (HAMD)                       | BDI, II                   | P<0.05(FDR)         | 10 Li,11 AC,6 AD, 5 AP, 4 UM     | Euthymic                            | YES | 10.5 |
| Liu et al.(2010a)        | 14(7)  | 21(13) | 35.6 | 38.3 | NA   | 7.3  | 6.7 (HAMD)                       | BDI                       | P<.001(uncorrected) | 2 Li, 12 AC, 12 AD, 1AP.         | 7 Manic, 7 depressed                | NA  | 11   |
| Liu et al.(2010b)        | 13(11) | 21(13) | 35.1 | 38.3 | NA   | 9.4  | 9.5 (HAMD)                       | BDII                      | P<.001(uncorrected) | 10 AC, 10 AD, 1 AP.              | 5 Manic,8 Depressed                 | NA  | 11   |
| Magioncalda et al.(2016) | 61(43) | 42(27) | 44.6 | 44.3 | 25.1 | 19.6 | 6.9-Ma., 21.5-De., 3.6-Eu (HAMD) | BDI                       | P<0.01(TFCE)        | 52 MS, 22 AD, 35 AP, 21 D, 2 UM. | 21 Manic, 20 Depressed, 20 Euthymic | NA  | 11.5 |
| Oertel et al.(2014)      | 30(14) | 32(16) | 39.2 | 39.2 | NA   | 10.2 | NA (HAMD)                        | BDI                       | P<0.01(TFCE)        | 24 MS, 12 AD, 13 NL,5 AL         | Euthymic                            | NA  | 10.5 |
| Gao et al.(2013)         | 18(12) | 18(12) | 15.1 | 14.1 | 13.8 | 1.3  | 33.4 (YMRS)                      | BDI, II                   | P<0.05(TFCE)        | 2 UM, 8 VP, 7 Li, 13 AP, 3 AD.   | Manic                               | YES | 11   |
| Teixeira et al.(2014)    | 18(6)  | 20(6)  | 12.3 | 12.7 | 9.5  | 2.8  | 8.7 (YMRS)                       | BDI, II, NOS <sup>a</sup> | P<0.05(TFCE)        | All UM.                          | 6 Manic, 8 Euthymic, 4 Mixed        | YES | 11   |
| Haarman et al.(2016)     | 21(12) | 22(11) | 44.7 | 38.2 | 19.5 | 25.2 | 0.2(YMRS)                        | BDI                       | P<0.05(TFCE)        | Medicated                        | Euthymic                            | NO  | 11.5 |

Abbreviations: BD: bipolar disorder; RBD: remitted with bipolar disorder; DBP: depressed with bipolar disorder. NA: not available; SVC: small-volume corrections; FWE: familywise error correction; HAMD, Hamilton Depression Rating Scale; SSPI: Signs and Symptoms in Psychotic Illness Scale; YMRS: Young Mania Rating Scale; TFCE: threshold-free cluster enhancement; AP: antipsychotic medication; AD: antidepressant medication; AE: antiepileptic medication; BDZ: benzodiazepine; AC: Anticonvulsant; NL: neuroleptics; AL: anxiolytics; VP: valproate; Li: lithium; MS: mood stabilizing medication; UM: unmedicated.

<sup>a</sup> Children and adolescents were diagnosed as BD NOS if they presented clear manic or hypomanic episodes with elation and/or grandiosity but lacked the duration needed to be classified as BD I or BD II.

#### Comorbidity:

- 1) MahonSU et al.: substance abuse or dependence (n=3), anorexia nervosa (n = 1), panic disorder with (n = 1) and without (n = 1) a history of agoraphobia, anxiety disorder not otherwise specified (NOS) (n = 2), posttraumatic stress disorder (PTSD) (n = 2), generalized anxiety disorder (n = 1), specific phobia (n = 1), and bulimia nervosa (n = 1).
- 2) MahonNSU et al.: substance abuse or dependence (n=5), obsessive-compulsive disorder, OCD (n = 1) and agoraphobia without a history of panic disorder (n = 1).
- 3) Sprooten et al.: anxiety disorder (n=30), alcohol use disorder (n=33), substance use disorder (n=29), nicotine dependence, current (n=21)
- 4) Gao et al.: anxiety (n=1), ADHD (n=1), OCD (n=2)
- 5) Teixeira et al.: attention deficit hyperactivity disorder (n = 9), oppositional defiant disorder (n = 5), generalized anxiety disorder (n = 3), conduct disorder (n = 2), simple phobia (n = 2), post-traumatic stress disorder (n = 2), panic disorder (n = 1), separation anxiety disorder (n = 1), obsessive-compulsive disorder (n = 1) and Tourette (n = 1).
- 6) Wessa *et al.*: panic disorder (n=1)