Supplemental Table 1. Six lifetime phenotype dimensions of bipolar disorder

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| --- | --- |
| Name of dimension | Included variables |
| Depression | Depressed mood  Loss of interest  Fatigue  Decreased concentration  Suicidal ideation during depression  Guilty feeling  Decreased appetite  Psychomotor agitation  Psychomotor retardation  (hypo)manic episode at onset\*  Unipolar mania\* |
| Cyclicity | Frequent episodes  Frequent depressive episodes  Frequent (hypo)manic episodes  Rapid cycling |
| Elation | Talkativeness  Flight of ideas  Grandiose ideas  Elated mood  Increased goal-directed activity  Decreased sleep need  Excessive involvement in activity |
| Psychotic/ irritable mania factor | Psychotic features during mania  Irritability  Distractability  Mixed mania |
| Atypical vegetative symptoms | Hypersomnia  Increased appetite  Early age at onset (<22 yrs)  Suicide  Insomnia\* |
| Comorbidity | Bulimia nervosa  Panic disorder  Psychotic features during depression  Phobia  Eveningness  Obsessive compulsive disorder |

Variables with rotated factor loading of <0.2 were excluded.

\*Variables that showedsignificant negative correlations with other variables

Supplemental Table S2. Reference data used to calculate polygenic risk score

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| --- | --- | --- | --- | --- | --- | --- | --- |
| PRS\_Name | Trait | ancestry | Sample size | First author | Year | Journal | Link |
| PRS-SCZ | schizophrenia | European and East Asian | 67,390 patients and 94,015 controls | Truvetskoy | 2022 | Nature | https://www.nature.com/articles/s41586-022-04434-5 |
| PRS-SCZ-EA | schizophrenia | East Asian | 14,004 patients and 16,757 controls | Unpublished |  |  | Separated results from a study by Truvetskoy et al. |
| PRS-BD | Bipolar disorder | European | 41,917 patients and 371, 549 controls | Mullins | 2021 | Nature genetics | https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8192451/ |
| PRS-BD-EA | Bipolar disorder | East Asian \*(Japanese) | 2,964 patients and 61,887 controls | Ikeda | 2018 | Mol Psychiatry | *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5822448/* |
| PRS-BDI | Bipolar disorder type I | European | 25,969 patients | Unpublished |  |  | From the PGC-3 bipolar I disorder |
| PRS-BDII | Bipolar disorder type II | European | 6,781 patients | Unpublished |  |  | Fromt the PGC-3 Bipolar II disorder |
| PRS-MDD | Major depressive disorder | Multi ancestry | 88,316 patients and 902,757 controls | Meng | 2024 | Nature genetics | https://www.nature.com/articles/s41588-023-01596-4 |
| PRS-MDD-EA | Major depressive disorder | East Asian | 17,076 patients and 248,775 controls | Giannakopoulou | 2021 | JAMA psychiatry | https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8482304/ |
| PRS-ANX | Anxiety disorder | European | 7,016 patients and 14,745 controls | Otowa | 2016 | Molecular psychiatry | https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4940340/ |
| PRS-OCD | Obsessive-compulsive disorder | European | 2,688 patients and 7,337 controls | International Obsessive Compulsive Disorder Foundation Genetics Collaborative (IOCDF-GC) and OCD Collaborative Genetics Association Studies (OCGAS) | 2018 | Molecular Psychiatry | https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6660151/ |
| PRS-ADHD | ADHD | European | 38,691 patients and 186,843 controls | Demontis | 2022 | Nature genetics | https://www.nature.com/articles/s41588-022-01285-8 |

\*Korean samples were excluded in the polygenic risk score construction.