

Supplementary Table 1. Characteristics of data sources used in this study

Traits	Data sources	Sample size (cases/controls)	Ancestry	Reference
POAG (discovery)	GWAS meta-analysis	15,229/177,473	European	(Gharahkhani et al., 2021)
SCZ	PGC	33,640/43,456	European	(Consortium, 2014)
ADHD	PGC	20,183/35,191	European	(Demontis et al., 2019)
AD	FinnGen	12,513/198,110	European	(Kurki et al., 2023)
BD	GWAS meta-analysis	7,647/27,303	European	(Hou et al., 2016)
DD	FinnGen	23,424/192,220	European	(Kurki et al., 2023)
POAG (validation)	FinnGen	3,412/210,201	European	(Kurki et al., 2023)

ADHD: Attention-deficit/hyperactivity disorder; AD: Anxiety disorder; BD: Bipolar disorder; DD: Depressive disorder; PGC: Psychiatric Genomics Consortium; POAG: Primary open-angle glaucoma; SCZ: Schizophrenia.

References

- Consortium, S.W.G.o.t.P.G. (2014). Biological insights from 108 schizophrenia-associated genetic loci. **Nature** 511, 421-427.
- Demontis, D., Walters, R.K., Martin, J., Mattheisen, M., Als, T.D., Agerbo, E., Baldursson, G., Belliveau, R., Bybjerg-Grauholm, J., Bækvad-Hansen, M., *et al.* (2019). Discovery of the first genome-wide significant risk loci for attention deficit/hyperactivity disorder. **Nat Genet** 51, 63-75.
- Gharahkhani, P., Jorgenson, E., Hysi, P., Khawaja, A.P., Pendergrass, S., Han, X., Ong, J.S., Hewitt, A.W., Segrè, A.V., Rouhana, J.M., *et al.* (2021). Genome-wide meta-analysis identifies 127 open-angle glaucoma loci with consistent effect across ancestries. **Nat Commun** 12, 1258.
- Hou, L., Bergen, S.E., Akula, N., Song, J., Hultman, C.M., Landén, M., Adli, M., Alda, M., Ardan, R., Arias, B., *et al.* (2016). Genome-wide association study of 40,000 individuals identifies two novel loci associated with bipolar disorder. **Hum Mol Genet** 25, 3383-3394.
- Kurki, M.I., Karjalainen, J., Palta, P., Sipilä, T.P., Kristiansson, K., Donner, K.M., Reeve, M.P., Laivuori, H., Aavikko, M., and Kaunisto, M.A. (2023). FinnGen provides genetic insights from a well-phenotyped isolated population. **Nature** 613, 508-518.