

Comparison of SAD variance among methods to adjust for population structure

Number of significant PC-wise
SAD components in first 20 PCs

None	GWAS sample PCs	Target sample PCs	Both sets of PCs	Linear Mixed Model (LMM)	LMM with GWAS sample PCs
1	1	1	2	1	1

Median across traits

Isotropic inflation

None	GWAS sample PCs	Target sample PCs	Both sets of PCs	Linear Mixed Model (LMM)	LMM with GWAS sample PCs
2.9	2.1	2.6	1.7	1.2	1.2

0	1	0	0	0	0
4	1	4	2	5	2
1	2	1	2	0	0
1	0	0	2	0	1
0	0	0	0	1	0
0	0	0	0	0	0
3	3	3	3	2	2
1	2	3	4	4	2
0	1	0	0	1	0
1	1	0	2	4	5
0	1	1	3	0	1
0	1	0	2	0	0
6	7	6	8	8	8
2	2	2	2	1	1
5	0	2	0	5	0
6	5	6	6	7	7
1	1	1	0	0	0

Waist circumference

Hip circumference

Household income

Neuroticism score

Pack years of smoking

Years of schooling

Alcohol intake frequency

Overall health rating

Body mass index

Birth weight

Hand grip strength

Pulse rate

Hair color

Height

Diastolic blood pressure

Skin color

Forced vital capacity

1.74	8.93	1.71	1.72	1.02	1.02
1.46	4.17	1.62	1.46	1.12	1.05
4.53	3.90	4.32	4.27	3.98	3.05
3.35	3.69	2.38	2.92	2.54	2.75
2.96	3.44	5.48	3.50	2.68	2.52
2.91	3.41	3.32	3.12	3.13	7.89
4.59	3.00	2.12	2.02	1.34	1.32
1.82	2.19	2.24	2.25	1.44	1.56
6.95	2.14	3.24	2.08	1.20	1.15
2.10	2.04	2.43	2.95	5.00	1.46
3.97	1.75	1.73	1.66	1.08	1.15
1.68	1.71	2.61	1.61	2.17	1.41
3.49	1.63	2.65	1.63	0.98	0.98
3.68	1.59	3.32	1.61	1.23	1.24
1.37	1.48	5.47	1.63	0.91	0.94
1.51	1.45	7.35	1.61	0.87	0.86
2.67	1.43	2.93	1.35	1.09	1.14