

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
2	2	1	2	2	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
1.9	2.1	2.1	1.9	1.6	1.5

5	4	6	4	6	6
0	1	0	0	1	1
1	0	0	1	1	1
0	1	0	0	2	1
2	2	2	2	2	2
0	1	0	0	1	0
1	2	1	2	0	0
3	1	1	1	2	2
1	0	0	0	1	0
2	2	3	2	2	1
5	3	4	4	3	3
1	0	1	1	1	1
3	4	3	3	3	3
0	0	0	0	1	1
8	9	8	7	8	9
4	3	4	3	1	1
3	5	3	4	5	3

Skin color

Overall health rating

Waist circumference

Years of schooling

Body mass index

Neuroticism score

Hand grip strength

Household income

Birth weight

Pulse rate

Hip circumference

Alcohol intake frequency

Height

Pack years of smoking

Hair color

Forced vital capacity

Diastolic blood pressure

1.82	6.38	3.27	1.68	0.87	0.85
2.33	3.19	2.01	2.19	1.77	1.95
4.57	2.59	3.32	2.24	1.65	1.79
3.96	2.45	2.44	2.47	2.01	1.88
1.84	2.22	2.26	2.06	3.02	1.50
1.87	2.10	1.75	1.56	1.85	2.54
1.70	2.10	2.07	3.04	1.65	1.54
3.03	2.08	2.60	2.12	2.31	2.11
2.08	2.07	2.03	2.77	1.79	3.11
1.95	2.05	3.94	1.93	1.63	1.71
1.85	1.83	1.85	1.75	1.23	1.27
2.06	1.80	2.04	1.85	1.69	1.59
2.07	1.68	2.57	1.68	1.64	1.34
1.54	1.65	1.96	1.88	1.29	1.49
1.67	1.61	3.00	1.61	1.07	1.04
1.69	1.53	1.63	1.47	1.35	1.23
1.42	1.39	1.63	3.24	1.26	1.29