# Comparison of SAD variance among methods to adjust for population structure
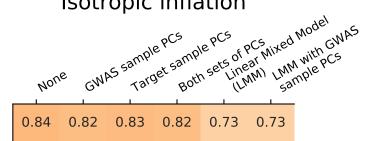
## Number of significant PC-wise SAD components in first 20 PCs

## Isotropic inflation

| Trait | None | GWAS sample PCs | Target sample PCs | Both sets of PCs | Linear Mixed Model (LMM) | LMM with GWAS sample PCs | None | GWAS sample PCs | Target sample PCs | Both sets of PCs | Linear Mixed Model (LMM) | LMM with GWAS sample PCs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Median across traits | 3 | 1 | 2 | 1 | 3 | 2 | 0.84 | 0.82 | 0.83 | 0.82 | 0.73 | 0.73 |
| Height | 6 | 5 | 3 | 5 | 6 | 6 | 1.71 | 1.31 | 1.62 | 1.30 | 1.08 | 1.07 |
| Body mass index | 0 | 1 | 0 | 1 | 1 | 1 | 1.12 | 1.04 | 1.12 | 1.05 | 0.91 | 0.90 |
| Skin color | 5 | 4 | 4 | 3 | 6 | 5 | 1.04 | 1.00 | 1.03 | 1.00 | 0.93 | 0.93 |
| Household income | 5 | 2 | 3 | 1 | 3 | 2 | 1.04 | 0.99 | 1.04 | 0.98 | 0.92 | 0.89 |
| Waist circumference | 1 | 1 | 1 | 1 | 1 | 1 | 0.94 | 0.92 | 0.93 | 0.92 | 0.80 | 0.81 |
| Hair color | 7 | 2 | 5 | 1 | 3 | 3 | 0.99 | 0.89 | 0.96 | 0.89 | 0.75 | 0.75 |
| Birth weight | 1 | 1 | 2 | 1 | 2 | 2 | 0.85 | 0.87 | 0.83 | 0.85 | 0.70 | 0.72 |
| Forced vital capacity | 6 | 1 | 4 | 0 | 3 | 2 | 0.90 | 0.84 | 0.87 | 0.84 | 0.75 | 0.75 |
| Hand grip strength | 2 | 0 | 2 | 0 | 2 | 1 | 0.84 | 0.82 | 0.83 | 0.82 | 0.80 | 0.80 |
| Pulse rate | 0 | 0 | 0 | 0 | 0 | 0 | 0.80 | 0.80 | 0.77 | 0.77 | 0.73 | 0.71 |
| Hip circumference | 1 | 3 | 1 | 1 | 3 | 4 | 0.76 | 0.76 | 0.76 | 0.77 | 0.71 | 0.72 |
| Diastolic blood pressure | 6 | 6 | 5 | 5 | 4 | 4 | 0.75 | 0.74 | 0.75 | 0.74 | 0.72 | 0.73 |
| Overall health rating | 3 | 3 | 3 | 3 | 4 | 2 | 0.73 | 0.73 | 0.72 | 0.72 | 0.67 | 0.66 |
| Years of schooling | 3 | 2 | 2 | 3 | 3 | 3 | 0.69 | 0.68 | 0.69 | 0.67 | 0.61 | 0.61 |
| Alcohol intake frequency | 0 | 0 | 0 | 0 | 1 | 1 | 0.64 | 0.65 | 0.64 | 0.65 | 0.57 | 0.57 |
| Neuroticism score | 0 | 0 | 0 | 0 | 1 | 1 | 0.62 | 0.63 | 0.61 | 0.61 | 0.56 | 0.56 |
| Pack years of smoking | 4 | 1 | 3 | 3 | 0 | 1 | 0.53 | 0.46 | 0.51 | 0.45 | 0.42 | 0.40 |