

Fig. S1.

Quantile-quantile (Q-Q) plot comparing empirical $-\log_{10}$ p-values for testing the effects of a SNP set using the GEE KM test (based on 1,000,000 simulations under the null model) against those expected under the null from the following four simulation settings: A) 500 sibpairs (a total sample size of 1000) without the small sample size adjustment; B) 500 sib pairs with the perturbation-based correction method; C) 300 sib pairs without the small sample size adjustment; D) 300 sib pairs, perturbation-based correction method. The samples are generated under random sampling schemes.

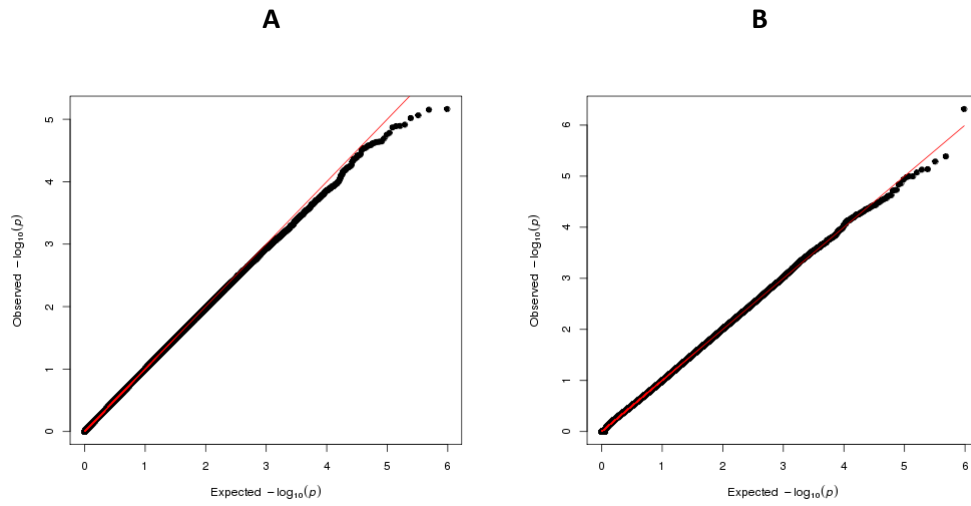


Fig. S2.

Q-Q plot comparing empirical ($-\log_{10}$) p-values for testing the effects of a SNP set using the GEE KM test (based on 1,000,000 simulations under the null model) against those expected under the null from the simulation settings with 500 sib pairs and each family has 4 sibs: A) without the small sample size adjustment; B) perturbation-based correction method.