

Supplementary Materials

Table S1. Power comparisons of the Nonp-FAM and MAX-FAM methods for three ordinal traits at significance level $\alpha = 0.05$

RVs	Test	$\beta_1 = 0.8$	$\beta_1 = 0.6$	$\beta_1 = 0.4$	$\beta_1 = 0.2$
		$\beta_2 = 0.4$	$\beta_2 = 0.3$	$\beta_2 = 0.2$	$\beta_2 = 0.1$
		$\beta_3 = 0$	$\beta_3 = 0$	$\beta_3 = 0$	$\beta_3 = 0$
20 (12 Causal)	Nonp-FAM	0.9720	0.8990	0.6910	0.2920
	MAX-FAM	0.1700	0.1100	0.1000	0.0690

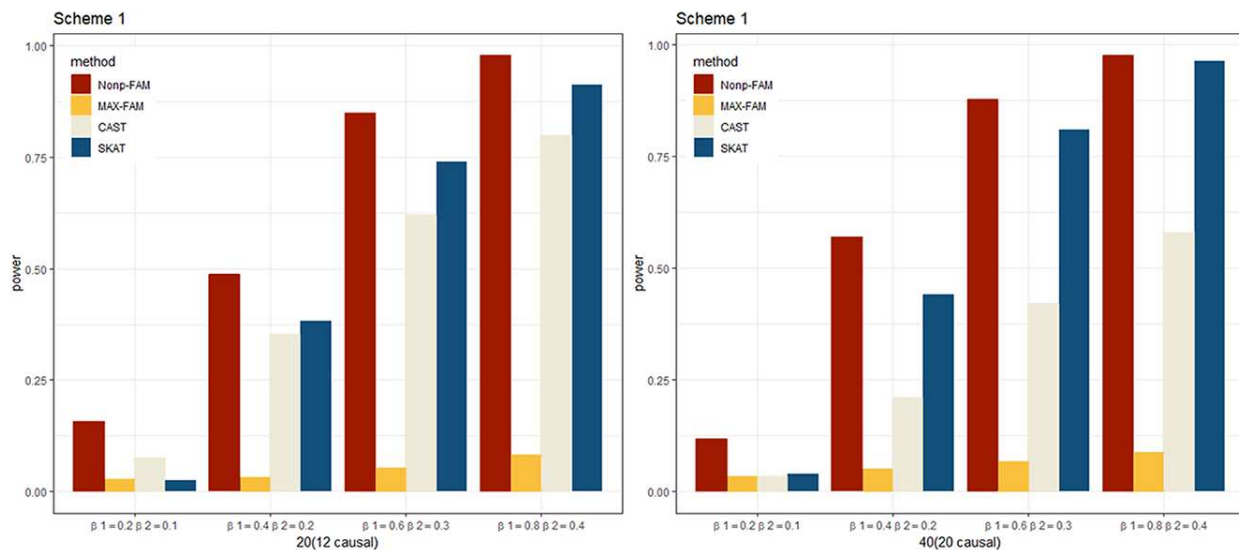


Figure S1. Power comparisons of the four methods for two binary traits in Scheme 1.

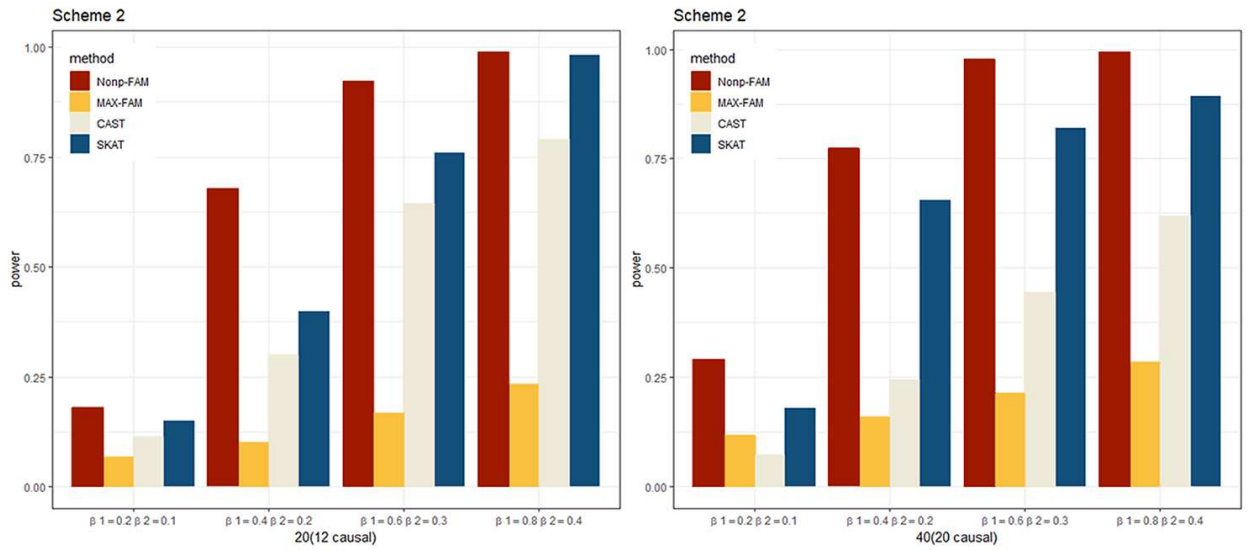


Figure S2. Power comparisons of the four methods for two ordinal traits in Scheme 2.

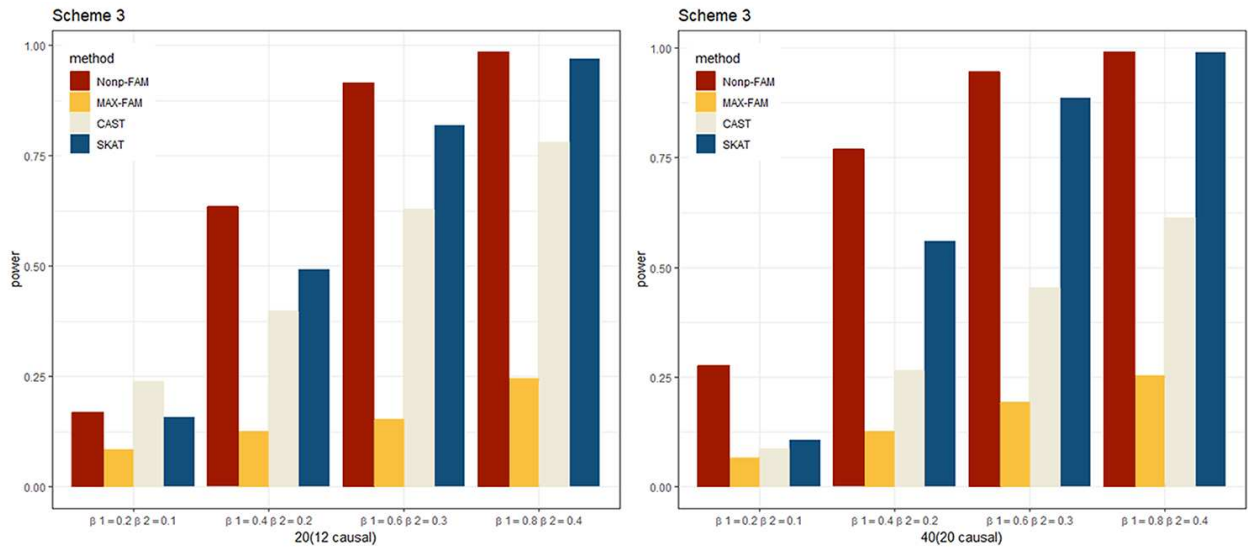


Figure S3. Power comparisons of the four methods for a mixture of binary and ordinal traits in Scheme 3.