Large sample size sim. 0.4 Fixed effects (PCA) Mixed effects (LMM)  $\mathsf{SRMSD}_\mathsf{p}$ median 0.2 quartiles extrema 4. AUCPR 0.2 Small sample size sim. 0.7 0.0  $\mathsf{SRMSD}_\mathsf{p}$ Ó 0.4 0.3 AUCPR 0.7 0.7 Ó Family structure sim.  $SRMSD_p$ 0.5 0.4 AUCPR 0.2 Number of PCs (r)