Replicable Brain-Cognition Correlations Require Larger Sample Sizes

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Presentation Abstract Summary Recent work has highlighted the poor generalizability of human neuroimaging findings (Poldrack et al., 2017), which calls into question whether brain-cognition relationships are replicable using "typical" sample sizes (i.e., N=20-30). To explore this possibility, we designed a simulation that assessed the degree to which a brain-cognition correlation observed in one group of individuals is replicable in independent cohorts as a function of sample size. The results of this simulation highlighted low replication rates (~30%) using sample sizes typical of most published studies.

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