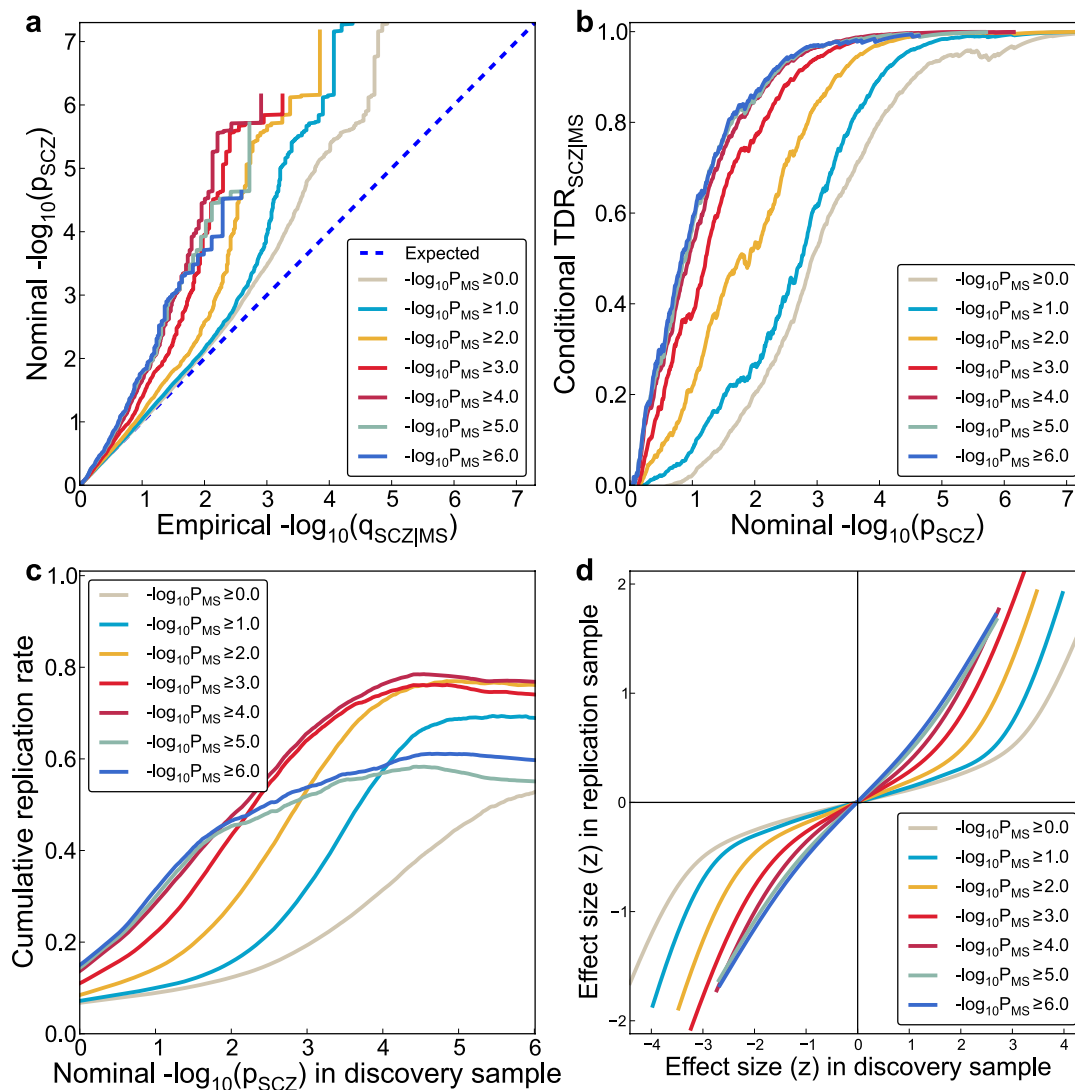## Supplementary Figure 3

a.) Conditional Q-Q plot of nominal versus empirical -log$_{10}$ p-values (corrected for inflation) in schizophrenia (SCZ) below the standard GWAS threshold of p < 5x10^{-8} as a function of significance of association with multiple sclerosis (MS) at the level of -log$_{10}$(p) ≥ 0, -log$_{10}$(p) ≥ 1, -log$_{10}$(p) ≥ 2, -log$_{10}$(p) ≥ 3, -log$_{10}$(p) ≥ 4, -log$_{10}$(p) ≥ 5 and -log$_{10}$(p) ≥ 6 corresponding to p ≤ 1, p ≤ 0.1, p ≤ 0.01, p ≤ 0.001, p ≤ 0.0001, p ≤ 0.00001, p ≤ 0.000001, respectively. Dotted lines indicate the null-hypothesis. **b.**) Conditional True Discovery Rate (TDR) plots illustrating the increase in TDR associated with increased pleiotropic enrichment in SCZ conditioned on MS (SCZ|MS). **c.**) Cumulative replication plot showing the average rate of replication (p < 0.05) within SCZ sub-studies for a given p-value threshold shows that pleiotropic enriched SNP categories replicate at a higher rate in independent SCZ samples, for SCZ conditioned on MS (SCZ|MS). The vertical intercept is the overall replication rate per category. **d.**) Z-score-z-score plot demonstrates that the empirical replication z-scores closely match the expected a posteriori effect sizes of schizophrenia (SCZ) and are strongly dependent upon pleiotropy with multiple sclerosis (MS). Analysis is based on split half method of the 17 PGC SCZ sub-studies.