

Appendix 2: Plots of Simulation Results

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Four plots were provided to visualize the pattern of standardized bias, relative standard error (SE) bias, coverage rate of 95% CI, and empirical type I error rate.

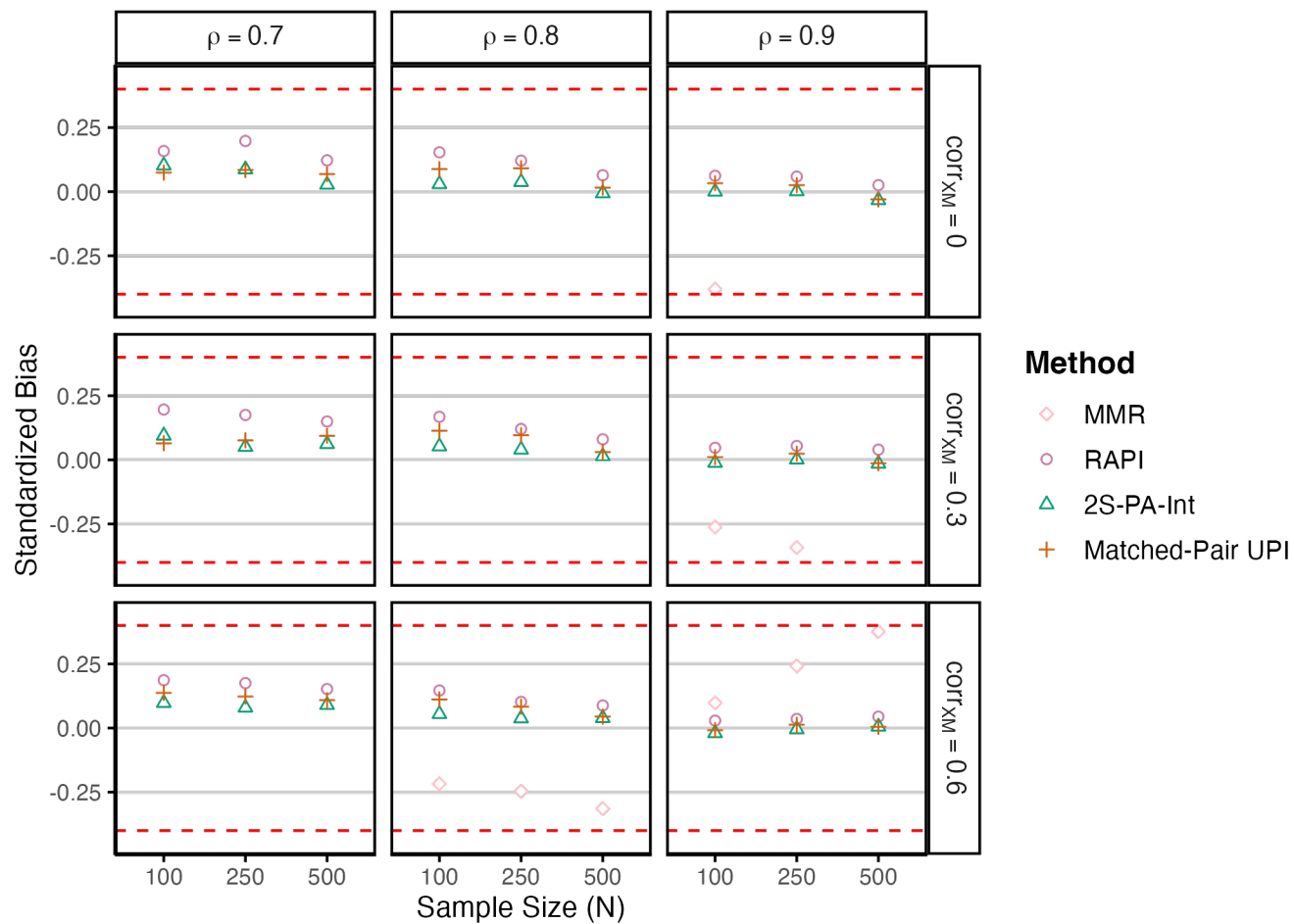


Figure 1. Standardized Bias in Latent Interaction Effect Estimates for Nonzero Effect

Note. Points with different shapes represent values for the three latent interaction methods across all simulation conditions. Some values of MMR fall outside the y-axis limits and are not shown. The red dashed lines indicate the acceptable range of $[-0.40, 0.40]$.

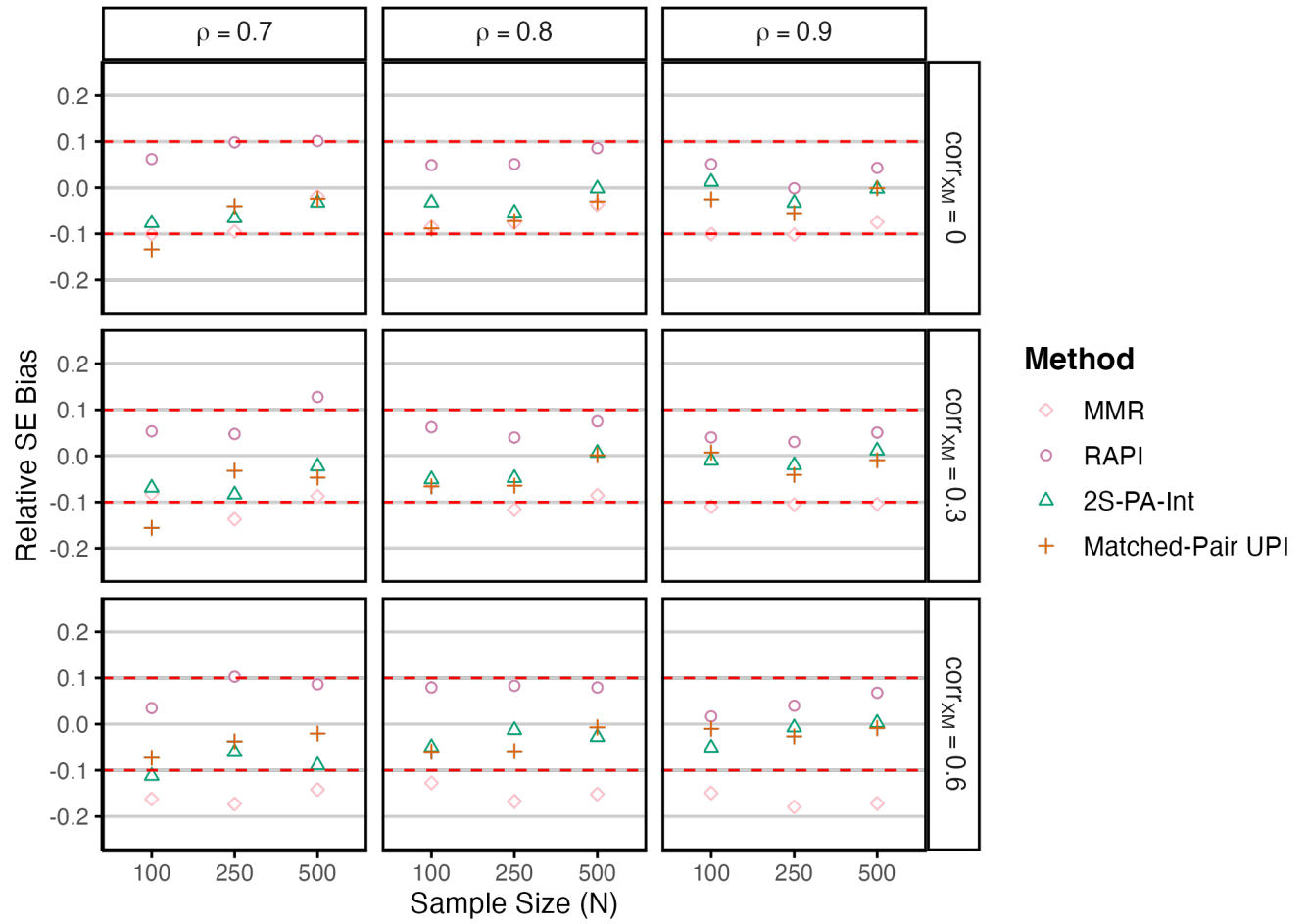


Figure 2. Relative SE Bias in Latent Interaction Effect Estimates for Nonzero Effect

Note. Points with different shapes represent values for the three latent interaction methods across all simulation conditions. The red dashed lines indicate the acceptable range of [-10%, 10%].

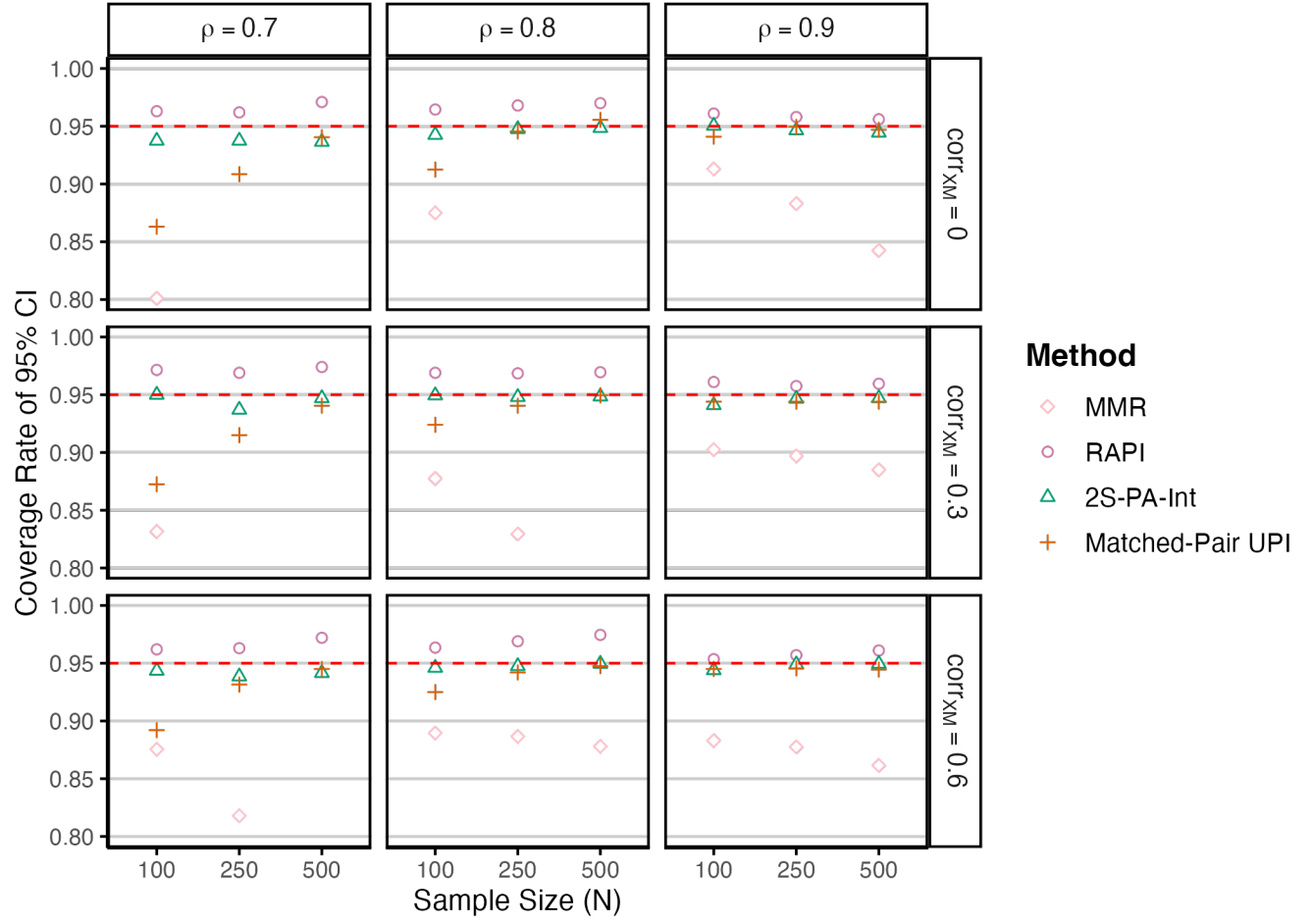


Figure 3. Coverage Rate of 95%CI in Latent Interaction Effect Estimates for Nonzero Effect

Note. Points with various shapes represent values of three latent interaction methods for all simulation conditions. The red dashed lines indicate the level of 95%.

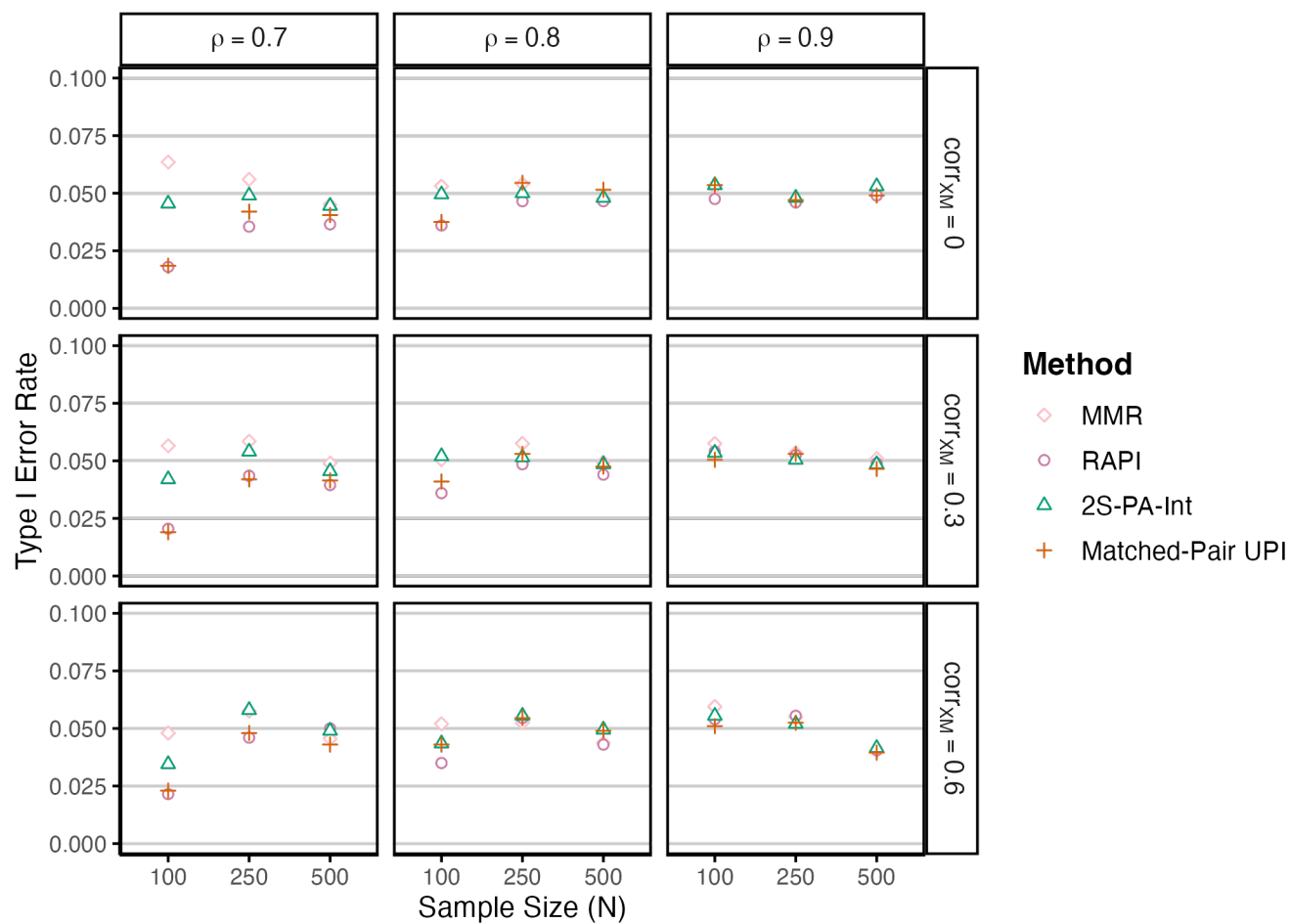


Figure 4. Empirical Type I Error Rates in Latent Interaction Effect Estimates for Zero Effect

Note. Points with various shapes represent values of three latent interaction methods for all simulation conditions.