Blocking Reduces, if not Removes, Attrition Bias

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Abstract

If an unit is compromised (e.g. missing, non-compliance) in experimental data with blocking, some scholars recommend deleting the other unit(s) in the same block, saying this leads to unbiased estimates. Others, however, criticize the blockwise deletion, arguing that it can result in biased estimates if the compromising mechanism is not independent of the potential outcomes. This paper demonstrates that, if blocking is successful, the blockwise deletion estimator is less biased and (in many cases) more efficient than the unitwise deletion and no deletion estimators. (the paper is uploaded at `http://asiapolmeth.princeton.edu/polmeth/files/Fukumoto.pdf`)