Feb 07, 2020

Power in a single case multiple baseline design

PLOS One

Samantha Bouwmeester[1], Joran Jongerling[1]

[1]Erasmus University Rotterdam

1 Works for me dx.doi.org/10.17504/protocols.io.9vrh656

Samantha Bouwmeester

ABSTRACT

A randomization test can be used to statistically test hypotheses in multiple baseline designs to complement the commonly used visual inspection analysis. A crossed factor simulation study was performed to investigate the power of the Koehler and Levin (1998)randomization test in an multiple baseline design. The results show that the degree of autocorrelation of the observations, the number of participants, the effect size, the overlap of possible start moments of the intervention between participants, the ratio of the number of measurements in the baseline- and intervention phase, a gradually emerging effect, and the number of measurements had strong main effects on the power. The two-way interactions between number of participants and effect size, and between the number of measurements and the number of start moments of the intervention also had a large effect. An online tool was developed to calculate the power of a multiple baseline design given several design characteristics.

EXTERNAL LINK

https://doi.org/10.1371/journal.pone.0228355

THIS PROTOCOL ACCOMPANIES THE FOLLOWING PUBLICATION

Bouwmeester S, Jongerling J (2020) Power of a randomization test in a single case multiple baseline AB design. PLoS ONE 15(2): e0228355. doi: 10.1371/journal.pone.0228355

ATTACHMENTS

Power Of Randomization Tests In MBD_Revision.docx

Supporting Information.docx

Fig 1.docx

Fig 2.docx

Fig 3.docx

Fig 4.docx

Fig 5.docx

Fig 6.docx

Fig 7.docx