

# Research Design Form

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## Introduction

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1. Researcher name
  2. Research project title
  3. One-sentence summary of research question
  4. Substantive motivation: Why should anyone care about the results of this research? [half page]
  5. Theoretical motivation: What theoretical questions can this research shed light on? [half page]
  6. Key literatures: List 3 or 4 readings that this work will speak to.
  7. What is your primary hypothesis?
  8. What is your estimand? (e.g., average treatment effect)
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## Sample

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9. What is your population of interest?
  10. Where and when will your study take place?
  11. Who/what units are in your study? How many units are in your study?
  12. How is this sample selected?
  13. Do some units need to be left out of the study? Because they must receive treatment or must be left out of treatment for logistical or other reasons?
  14. Are there any ethical concerns with respect participation?
  15. Do you expect treatment to work differently for certain subgroups?
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## Treatment (X)

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16. What is your treatment? Will you have multiple treatments?
  17. What will your control condition be? Will it be a pure control or placebo?
  18. Are there any ethical concerns with the treatment?
  19. At what level will you randomize the treatment?
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## Outcome (Y)

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20. What is your primary outcome?
  21. How will you measure it? What data do you need? (e.g., administrative data, surveys, other)
  22. At what level is or will be the measure available? (e.g., individuals, villages, schools)
  23. What are your priors about the outcome (mean, SD)? This may come from previous studies or educated guesses.
  24. How many rounds of data collection will you conduct?
  25. How will you minimize attrition?
  26. How will you minimize mismeasurement and untruthful reporting?
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## Randomization Strategy

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27. What type of randomization strategy will you use? Examples: simple, complete, block, cluster, factorial, encouragement, two-tier, step-wedge, etc. Make sure this strategy is consistent with the level of randomization (possible clusters) and expected heterogeneity of treatment effects (possible blocks).
28. How many blocks will you have and how large are they (if any)? Consider blocking on variables that you think lead the treatment to work differently for certain individuals/groups/communities.
29. How many clusters will you have and how large are they (if any)?

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### Randomization Strategy

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30. Is interference a possible concern? If so, what is your plan for minimizing interference?

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### Implementation

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- 31. How will you do the actual randomization? In public, drawing from a bowl, on a computer?
  - 32. Who will implement the treatment?
  - 33. If there is a partner who will implement the treatment, what arrangements do you have?
  - 34. What are the logistical challenges? Any special challenges for control units?
  - 35. How will you track the quality of implementation?
  - 36. How will you track compliance with the treatment?
  - 37. How will you minimize non-compliance with the treatment (if applicable)?
  - 38. How will you check the quality of your data?
  - 39. How will data be anonymized and securely stored (if applicable)?
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### Power

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- 40. What is your expected effect size? This might be from a previous study or a target size below which one would not be interested in future interventions.
  - 41. If you have clusters, what is the intra-cluster correlation (ICC)?
  - 42. What is your power? If you want to calculate your sample size given expected effect, use [egap.org/power](http://egap.org/power) or Stata/R. If you want to calculate your effect size given a maximum sample, use Stata/R. Take into account your outcome type (binary, continuous) and clustering (icc), if needed.
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### Analysis and Interpretation

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- 43. What is your estimator? (e.g., difference in means, OLS with block weights, any clustering). Note that this should be closely linked to your randomization design.
  - 44. If you find that your results are consistent with your hypothesis, what alternative explanations might there be? What data would help you distinguish between your explanation and alternative ones? Make sure you have a plan to collect this data.
  - 45. If you find that your results are not consistent with your hypothesis, what data will help you figure out what might have happened? Make sure you have a plan to collect this data.
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