

# Preregistration and Registered Reports

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# What is preregistration?

The specification of a research design, hypotheses, and analysis plan prior to observing the outcomes of a study (Nosek & Lindsay, 2018)

## Preregistration:



## Registered Report:

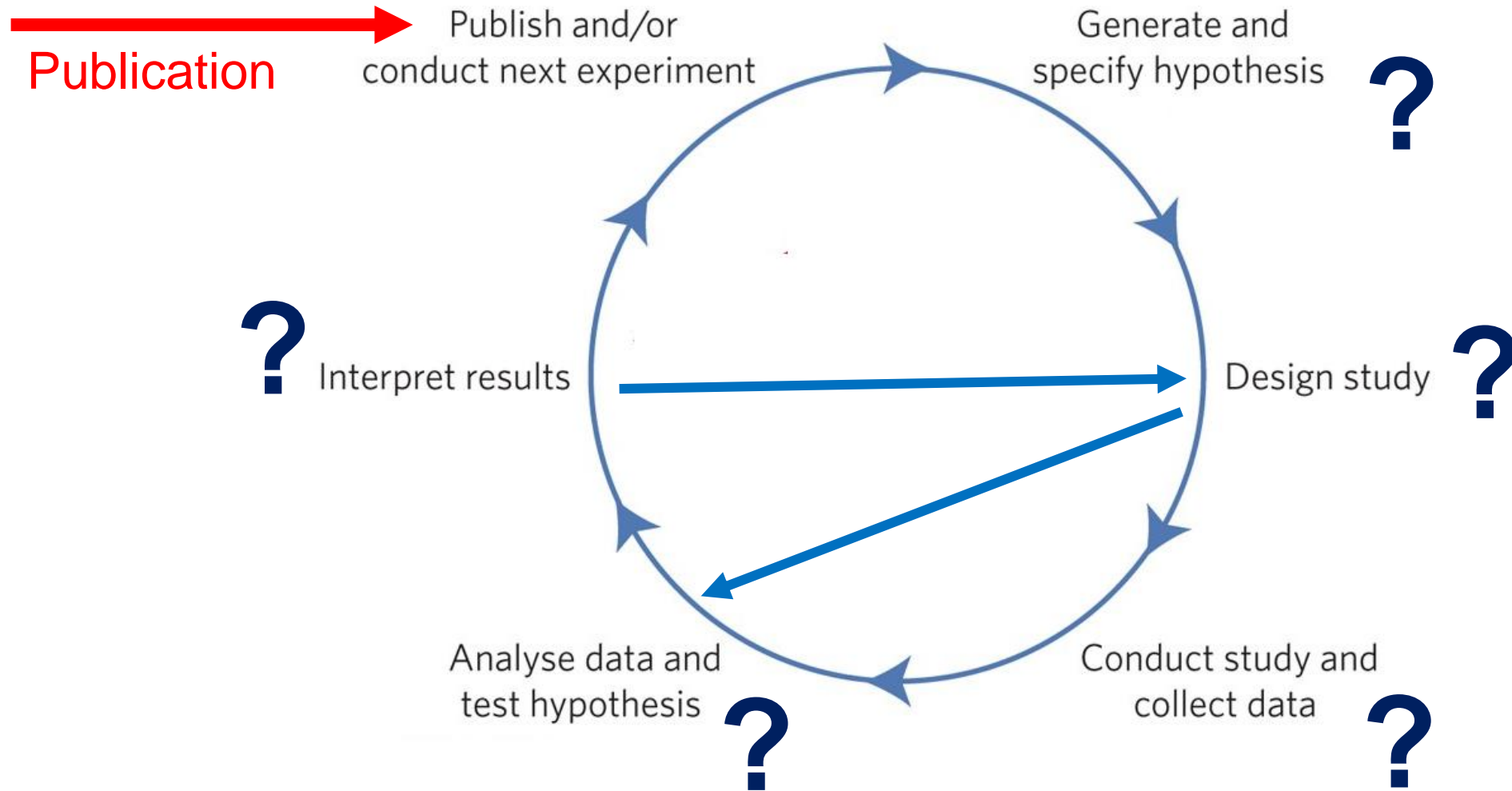


# What is preregistration?

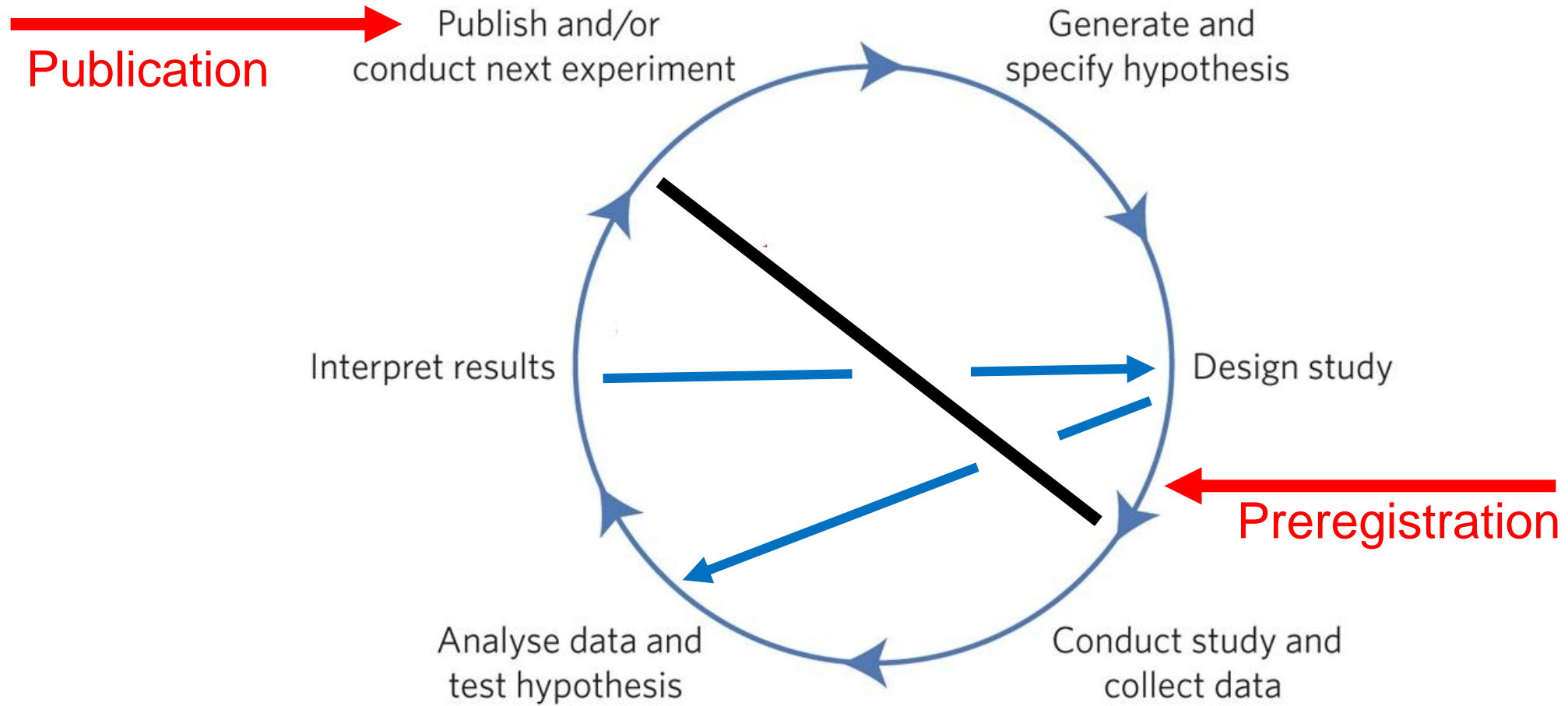
The specification of a research design, hypotheses, and analysis plan prior to observing the outcomes of a study (Nosek & Lindsay, 2018)



# Potential Impact and Benefits



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# Good practices

## What is a good preregistration?

- Preregistration producibility
  - Operationalizations of variables, Data collection procedure, Statistical model, Inference criteria
- Preregistration-paper consistency
  - You are allowed to deviate from your preregistration!

## Examples:

- <https://osf.io/e2bjp>
  - IDs: 66, 79, 83, 87, 88, 99, 117, 122, 191, 198, 215, 229, 230, 235, 237, 250, 254, 255, 304, 322, 346, 358, 361, 362, 375, 383, 396, 399, 402, 429, 470, 471, 476, 477, 479



# Does preregistration have additional benefits?

Preregistration “forces” you to think carefully about your research design and planned analyses because others can scrutinize:

- The validity of your planned design and analyses
- The consistency between your plans and actual project

Sarafoglou et al. (2021): “Better science but more work”

Soderberg et al. (2021): “RR papers are of higher quality than non-RR papers”

Nosek et al. (2019): “Preregistration is hard, and worthwhile”

# How does preregistration work in practice?

NIH U.S. National Library of Medicine

ClinicalTrials.gov

Find Studies About Studies Submit Studies Resources About Site PRS Login

ClinicalTrials.gov is a database of privately and publicly funded clinical studies conducted around the world.

Explore 390,139 research studies in all 50 states and in 219 countries.

See listed clinical studies related to the coronavirus disease (COVID-19)

ClinicalTrials.gov is a resource provided by the U.S. National Library of Medicine.

IMPORTANT: Listing a study does not mean it has been evaluated by the U.S. Federal Government. Read our disclaimer for details.

Before participating in a study, talk to your health care provider and learn about the risks and potential benefits.

OSF REGISTRIES

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Increased our measures to flag spam content on OSF. Contact support@osf.io if you believe your content has been flagged in error.

Add New Registration

Do you have content for registration in an existing OSF project?

YES NO

Which type of registration would you like to create?

OSF Preregistration

OSF Preregistration

Open-Ended Registration

OSF-Standard Pre-Data Collection Registration

Pre-Registration in Social Psychology (van 't Veer & Giner-Sorolla, 2016): Pre-Registration

Preregistration Template from AsPredicted.org

Qualitative Preregistration

Find a study (all fields optional)

Status

☐ Recruiting and not yet recruiting studies

☒ All studies

Condition or disease (For i

Other terms (For example: N

Country

Search

Advanced

AsPredicted

Pre-Registration made easy

Sample 5 - SUMMER PROGRAMS - GPA performance, Chicago, July 2016 (#578)

Author(s)

Larry TheRobot (AsPredicted College) - larry@aspredicted.org

Created: 04/07/2016

Made public: 04/07/2016

1) What's the main question being asked or hypothesis being tested in this study?

A month-long academic summer program for disadvantaged kids will reduce the drop in academic performance that occurs during the summer.

2) Describe the key dependent variable(s) specifying how they will be measured.

Simple average GPA across all courses during the first semester after the intervention.

3) How many and which conditions will participants be assigned to?

Two conditions: Offering summer program: yes vs no.

4) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

Linear regression predicting the dependent variable with a dummy indicator for having been offered the summer program vs not (intention-to-treat analysis). We will also report results when controlling for baseline levels of the dependent variable (simple GPA average semester before training), gender & household income.

5) Any secondary analyses?

The effect may be larger for boys rather than girls, and for children living with one rather than two parents/guardians.

6) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

We will offer the program until 500 people have agreed to participate in it or until June 30, 2016 (whichever comes first).





7) Anything else you would like to pre-register? (e.g., data exclusions, variables collected for exploratory purposes, unusual analyses planned?)


We include a battery of questions for exploratory purposes including happiness, videogame playing and family activity. We will also collect data on a survey with 24 questions and will report the results of those data in a separate project.

8) Have any data been collected for this study already?

No, no data have been collected for this study yet

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# When do you (need to) preregister?

Is it important to preregister all your studies?

→ Only when you have a prediction that you want to draw an inference about

## Exploratory research:

- Not necessary to preregister but important to mention in the paper
- Preregistration does not make exploratory research less valuable

