

THE NULL HYPOTHESIS

AND HOW IT RELATES TO
ATHEISM AND GOD



HELLO AND WELCOME

- It is common to hear folks claim Atheism is the null hypothesis.
- In this SciPhi Short we will be going over what the null hypothesis is with a few examples.



WHAT IS A HYPOTHESIS?

- In science a hypothesis is an idea that proposes a tentative explanation about a phenomenon, or a narrow set of phenomena, observed in the natural world.
- The two primary features of a hypothesis are falsifiability and testability.
- These are reflected in an “If...then” statement summarising the idea and, in the ability, to be supported or refuted through observation and experimentation.

EXAMPLE OF A HYPOTHESIS

- An example of a hypothesis would be something like..
- **If** the COVID vaccine is effective **then** we would expect to see (in the vaccinated):
 - A reduction of infections
 - A reduction of hospitalisations
 - A reduction of serious complications
 - A reduction of deaths
- These could all be all part of a single hypothesis, e.g. H1, or be considered 4 separate hypotheses, H1-H4.

WHAT IS THE NULL HYPOTHESIS

- The Null Hypothesis, or H_0 , is a statistical concept with the aim of falsifying scientific information.
- Falsification is the ability to prove a hypothesis, theory or model wrong.
- Therefore, the null hypothesis would essentially be showing that there is no effect from your hypothesis.

EXAMPLE OF THE NULL HYPOTHESIS

- Using the previous hypothesis about COVID vaccinations the null hypothesis would be:
- There is no difference between the vaccinated and unvaccinated for
 - Infections
 - Hospitalisations
 - Serious illness
 - Death

SO, IS ATHEISM THE NULL HYPOTHESIS?

- If you are someone that uses atheism as "a lack of belief in gods" you are literally describing a psychological state. A psychological state is not a hypothesis.
- If, however, you use atheism as the proposition gods do not exist, then you may be aware that a proposition can form a hypothesis.
- However, a **hypothesis has to be testable and falsifiable.**
- God is unfalsifiable; therefore, this is not a hypothesis.

CONTEXTUAL HYPOTHESES

- There are, of course, specific things we could examine. For example; The efficacy of prayer.
- H1: If prayer is effective Christians being prayed for in hospital will heal faster and have a higher recovery rate than non-Christians that are not being prayed for.
- H0: If prayer is not effective, we would expect to see no significant difference in healing rate and recover between Christians who are being prayed for and non-Christians not being prayed for
- This doesn't test God though, just the efficacy of prayer.

SUMMARY

- A hypothesis has to be testable and falsifiable.
- The null hypothesis is essentially the description of what would falsify your hypothesis.
- God's existence cannot be falsified so cannot form a hypothesis.
- Atheism cannot be the null hypothesis.