

Observer Effect and Bias in Research

by Sophia Tutorial

WHAT'S COVERED

This tutorial will describe observer effect and observer bias in psychological research. Our discussion breaks down as follows:

- 1. Observer Effect
- 2. Observer Bias

1. Observer Effect

You may recall that one of the strengths of non-experimental research methods, like observations, case studies, or clinical studies, is that they observe people within a natural setting. The idea is that the results are more accurate because they reflect normal behaviors of people in the real world. However, there are still some potential issues with observers and their effects on research.

IN CONTEXT

You may be familiar with a scientific concept called the Heisenberg Uncertainty Principle, in the field of quantum physics. When examining quantum particles, which are very small, it was discovered that it is impossible to measure one aspect of these tiny particles without affecting another one.

In other words, you can't look at the position of a particle without affecting how it's moving, because when you examine it, it stops the movement or redirects it in some way. You can't determine the momentum of a particle without changing the position or moving it.

Now, we're not measuring small particles within psychology, but the premise is the same. We can't actually observe somebody without changing them in some way. We can't observe them and achieve a fully natural or accurate result.

This is what is called the **observer effect**, when changes in behavior are a result of being observed in research. The presence of the researcher themselves might affect whether a person does something or how they do it.

↔ EXAMPLE If you're conducting a study about selfishness and you are observing a subject, that person

is more likely to do something good they don't want to necessarily look bad. They sense you standing there observing, and they are more apt to do something selfless instead of selfish.

Therefore, as researchers, we need to be able to use tools and measures that are less obvious or invasive, like hidden cameras. In this way, we minimize the observer effect. However, it's always a consideration to keep in the back of your mind with non-experimental research.

TERM TO KNOW

Observer Effect

The subject's behavior changes due to being observed

2. Observer Bias

On the other hand, the problem affecting research with observers might be the observers themselves, which is known as **observer bias**. This occurs when a researcher's expectations about what will or will not happen can affect what they actually report.

☆ EXAMPLE For example, if you're reporting about teenagers being oppositional and defiant, then you will be specifically looking for these behaviors. You are more likely to notice them when they occur than you are to notice behaviors that are non-defiant. This observer bias is not necessarily intentional, but because you are trained to look for a specific quality, you might not notice other qualities, or you might overemphasize that specific quality.

Observers often use different tools to prevent or minimize the bias effect, such as rating scales, which are a list of traits or behaviors that guide observations and tell them what to look out for so they don't miss anything important. In addition, observers can use behavioral assessments, which is when an observer records how many times a different behavior occurs. Finally, they might use an observational record, which is a detailed record of all the things that they observe and the different behaviors that they see.

It is important to report all findings when conducting research, because others might be able to recognize potential sources for bias. This is why the process of publication and of replicating scientific research is critical to making sure that observer effect and observer bias aren't affecting the results.

TERM TO KNOW

Observer Bias

Researcher's expectations impact the data they collect

SUMMARY

When conducting non-experimental research, researchers must go to great lengths to avoid **observer effect** and **observer bias**, which can affect the results of their research. Observer effect occurs when the subject's behavior changes due to being observed. This can be minimized through the use of tools that are less invasive, like hidden cameras.

Observer bias refers to when a researcher's expectations impact the data they collect. It is not

necessarily intentional, but sometimes a researcher's training predisposes them to look for specific qualities at the expense of others, or overemphasize certain aspects of the data. Tools such as rating scales and behavioral assessments can help to prevent or minimize observer bias.

Good luck!

Source: THIS WORK IS ADAPTED FROM SOPHIA AUTHOR ERICK TAGGART.

TERMS TO KNOW

Observer Bias

Researcher's expectations impact the data they collect

Observer Effect

The subject's behavior changes due to being observed