

## **Unit 7: Validity and Generalisability in Research**

Welcome to week 7 where you will be looking at validity, generalisability and reliability. These are three important dimensions within research as they affect any conclusions you can make after your data collection and analysis. All these need to be considered before you collect any data.

You will then look at the differences in qualitative data and quantitative data and what you can do with it: how to analyse your data and how to present your results should be considered before you collect any data. Note that quantitative data leads us into descriptive and inferential statistics. Before this, however, there are processes of data cleansing and validation that need to be considered.

### **In this unit we shall:**

- Introduce the concepts of validity, generalisability and reliability and how they impact on your research design.
- Consider the differences between qualitative and quantitative data and how to analyse and present your results.

### **On completion of this unit you will be able to:**

- Understand how the concepts of validity, generalisability and reliability affect your investigation and the design of your research method.
- Consider how to analyse and present the results you obtain from your investigation and how they will enable you to answer your research question.

### **Reflection:**

#### **Validity**

The term "validity" is used to describe how well a particular approach measures the target variables. Research is said to be valid if and only if its findings are consistent with observed phenomena in the natural or social environment (Middleton, 2019)

Validity can be inferred from a measurement's high dependability. If a technique can't be relied upon, it's probably not a valid one.

Despite being more difficult to evaluate, validity is of paramount importance. Research is only useful if it measures what it purports to measure, therefore be sure your techniques are sound. This guarantees that the validity of your data analysis and interpretation.

Validity matters because it guides researchers in crafting effective survey questions and guarantees that they are measuring relevant factors. The extent to which a survey assesses the variables it sets out to measure is what is meant by "validity (NBRI, n.d.)."

### **Reliability:**

The consistency of a measurement is related to its reliability. A participant's responses on a motivational instrument should be somewhat consistent across administrations. Different measures can be used to get an approximate idea of how reliable something is, even though an exact calculation is impossible (Heale and Twycross, 2015).

What we mean by "reliability" is how consistently a certain measurement method yields the same results. The goal of establishing reliability and validity in research is simply to make sure that information is solid and replicable, and that results are correct. If the same result can be regularly achieved by applying the same procedures under the same circumstances, the measurement is called dependable. To guarantee the precision and accuracy of a measuring tool, it must first be shown to be valid and reliable (Mohajan, 2017).

### **Generalizability:**

To what extent may research findings be applied to a larger population or context is a measure of generalizability.

A study is said to have high generalizability if its findings may be applied to a wide variety of persons and settings. Results with limited generalizability can only be used with a select group of people or in a highly specific setting (www.hydroassoc.org, 2015).

The ability to generalize is crucial to the scientific method. It would be desirable to take a representative sample from the entire population when testing a hypothesis. It's the key that unlocks the door for scientists to apply their findings from the lab to society at large (Martyn Shuttleworth, 2020).

Research generalizability is crucial because it ensures that study findings can be extrapolated beyond the study's sample group.

### **References:**

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