

# IMPROVING RELIABILITY IN QUANT RESEARCH



Dr. Syed Owais  
Department of Sociology, University of Peshawar

1

## 1. Clearly Conceptualize all constructs/concepts



- When each measure indicates one and only one concept, reality improves.
  - i.e., Mandatory to develop unambiguous, clear theoretical definitions.
  - Constructs should be specified to eliminate “noise” (i.e., distracting or interfering information) from other
  - constructs.
- NUTSHELL: A concept should be clearly differentiated from synonymous words representing that idea.

25/10/2025

Dr. Syed Owais, Department of Sociology,  
University of Peshawar

2

2

## 2. Increase the Level of Measurement.



- Indicators at higher or more precise levels of measurement are more likely to be reliable than less precise measures because the latter pick up less detailed information.
- If more specific information is measured, then it is less likely that anything other than the construct will be captured.

25/10/2025

Dr. Syed Owais, Department of Sociology,  
University of Peshawar

3

3

## 3. Use Multiple Indicators of a Variable.



- Two indicators of the same construct are better than one; three indicators of the same construct are much better than two indicators and so on!

For example, **three indicators** of the variable, racial-ethnic prejudice. My **first indicator** is an attitude question on a survey. I ask research participants their beliefs and feelings about many different racial and ethnic groups.

For a **second indicator**, I observe research participants from various races and ethnic groups interacting together over the course of three days. I look for those who regularly either (1) avoid eye contact, appear to be tense, and sound cool and distant; or (2) make eye contact, appear relaxed, and sound warm and friendly as they interact with people of their same or with people of a different racial-ethnic group.

25/10/2025

Dr. Syed Owais, Department of Sociology,  
University of Peshawar

4

4

## Cont'd...



- Last, I **create an experiment**. I ask research participants to read the grade transcripts, resumes, and interview reports on 30 applicants for five jobs youth volunteer coordinator, office manager, janitor, clothing store clerk, and advertising account executive. The applicants have many qualifications, but I secretly manipulate their racial or ethnic group to see whether a research participant decides on the best applicant for the jobs based on an applicant's race and ethnicity.

25/10/2025

Dr. Syed Owais, Department of Sociology,  
University of Peshawar

5

5

## 4. Use Pre-tests, Pilot Studies, and Replication.



- Reliability can be improved by using a pre-test/pilot version of a measure first. Develop one or more draft or preliminary versions of a measure and try them before applying the final version.
  - This takes more time and effort.
- If while search the literature you find measures (i.e., questionnaire etc.) from past research, go ahead and use it.
  - build on and use a previous measure if it is a good one (citing the source!).
  - In addition, you may also want to add new indicators and compare them to the previous measure.

25/10/2025

Dr. Syed Owais, Department of Sociology,  
University of Peshawar

6

6

## References



- Neuman, W. Lawrence (2013). Social Research Methods: Qualitative and Quantitative Approaches. Available from: <https://cleavermonkey.files.wordpress.com/2015/10/w-lawrence-neuman-social-research-methods-qualitative-and-quantitative-approaches-pearson-education-limited-2013.pdf>
- Bryman, Alan (4<sup>th</sup> Ed.) (2012). *Social Research Methods* (3rd ed.). Oxford: Oxford University Press. Available from: <http://en.bookfi.net/book/2266020>

25/10/2025

Dr. Syed Owais, Department of Sociology,  
University of Peshawar

7