Presentation on
Sources of Invalidity

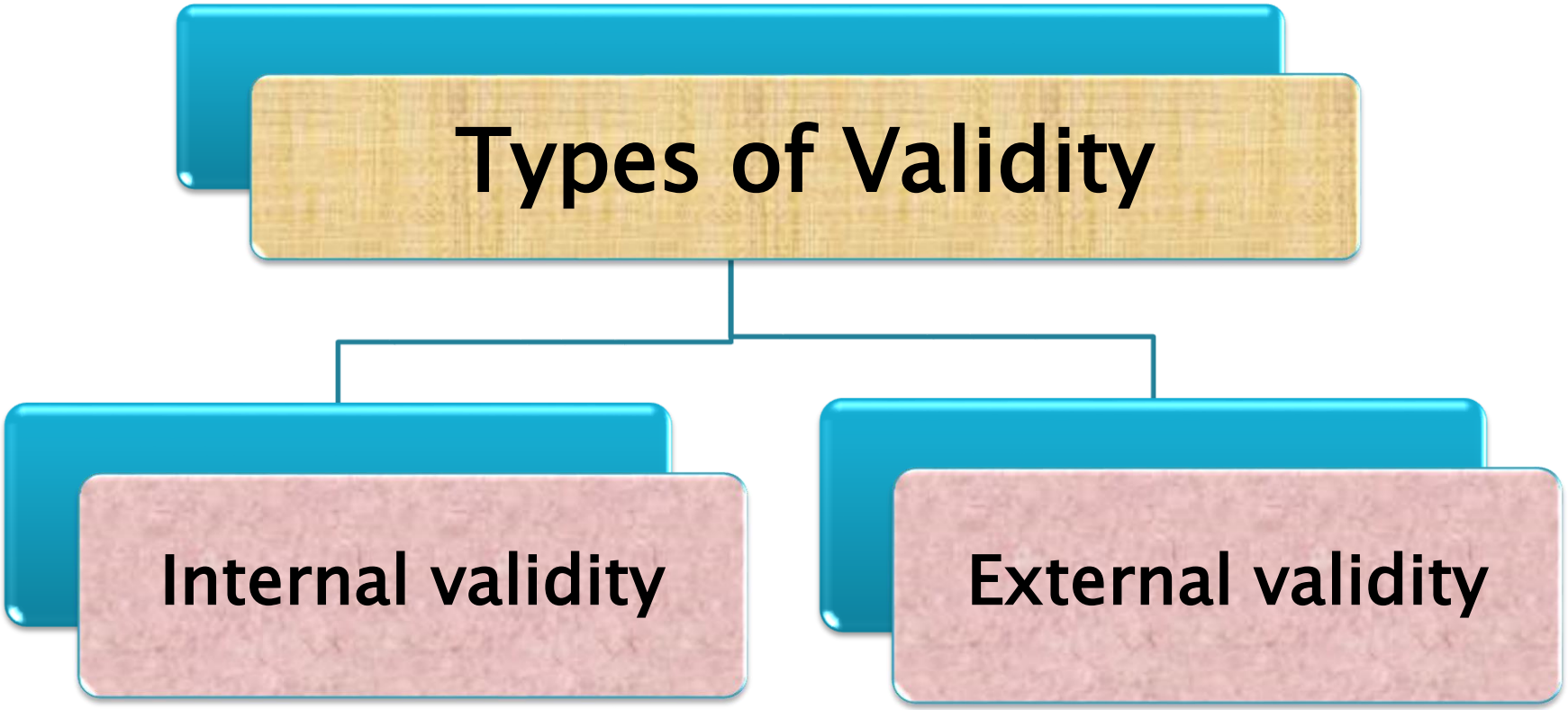
By
Dr Minakshi Pathak

Validity

- **“Validity is the degree to which a test or instrument measures what it purportes to measure”- Thomas and Nelson (2005)**

- The experiment tests the variable(s) that it purports to test.

- *Please note that validity discussed here is in the context of experimental design and not in the context of measurement.*


Types of Validity
Internal validity
External validity

Internal Validity

- The extent to which the results of a study can be attributed to the treatments used in the study.

External Validity

- Generalizability of the results of study.

Threats to Validity…

Threats To Internal Validity

- History
- Maturation
- Testing
- Instrumentation
- Statistical Regression
- Selection Bias
- Experimental Mortality
- Selection Maturation Interactions
- Expectancy

History

- The occurrence of events that are not part of the experimental treatment but that occur during the study and affect the dependent variable.

Maturation

- The physical, intellectual, and emotional changes that occur naturally in a study's participants over a period of time.

Testing

- Refers to improved scores on a posttest as a result of having taken a pretest.

Pre test

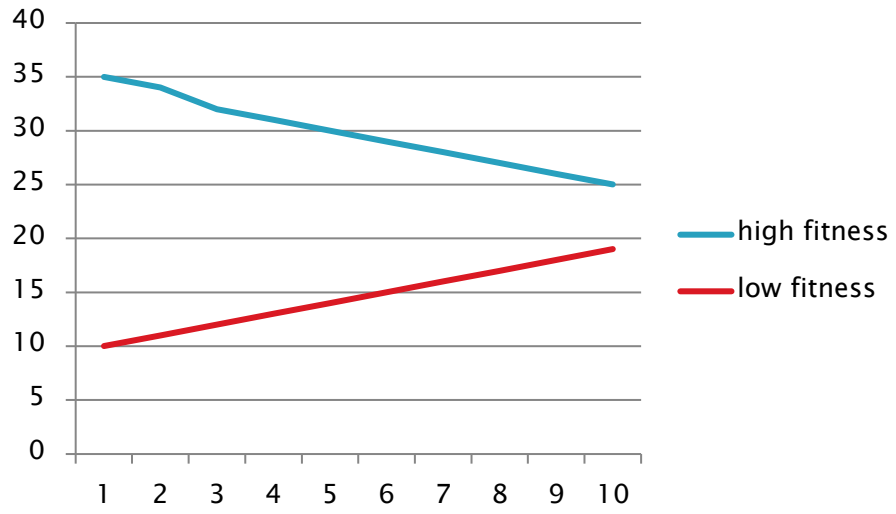
Post test

Instrumentation

- The unreliability or lack of consistency in measuring instruments that can result in an invalid assessment of performance.

Statistical Regression

- The facts the group selected on the basis of extreme scores are not as extreme on subsequent testing.



Selection Bias

- The outcome when already formed groups are compared raising the possibility that the groups were different before a study even begins.

Experimental Mortality

- The case in which participants drop out from a study which may significantly affect the study's results.

Selection Maturation Interaction

- If intact groups are used in a study, one group may profit more (or less) from a treatment or have an initial advantage because of maturation, history, or testing factors.

Treatment

Expectancy

- Researchers anticipates that certain participants will perform better.

Controlling Threats To Internal Validity

- Randomization
- Placebo
- Blind Set Up
- Double Blind Set Up

Placebos

- Method of controlling a threat to internal validity in which a control group receives a false treatment while the experimental group receives the real treatment.

Blind Setups

- Method of controlling a threat to internal validity in which the participant does not know whether he or she is receiving the experimental or control treatment.

Double-Blind Setups

- Method of controlling a threat to internal validity in which neither the participant nor the experimenter knows which treatment the Participants is receiving.

Uncontrolled Threats To Internal Validity

- Testing
- Instrumentation
- Experimental Mortality

THANK YOU