Threats to INTERNAL VALIDITY

I. **Threats due to How the Research is Conducted**

A. Procedure Validity and Reliability – conducting research accurately & consistently

1. Administering Accurate Measurement Techniques in a consistent manner
2. Treatment Validity and Reliability – measuring what we intend to measure
3. Manipulation Checks – ensure that treatment is valid and reliable

B. Controlling for Environmental Influences

1. History – changes in the environment external to a study that influences behavior
2. Sleeper Effect – any effect that is not immediately apparent but appears over time
3. Sensitatization – tendency of initial measurement to influence subsequent measurement
4. Data Analysis – improper procedures that result in invalid conclusions

II. **Threats due to Research Participants**

A. The Hawthorne Effect – change in research participant behavior is due to the fact that they **know they are being observed**

B. Selection (self-selection bias) – selection of texts or people that influence conclusions

C. Statistical Regression – tendency of people selected on the basis of initial extreme scores on a measurement instrument to **behave less atypically** on the second and subsequent times on that instrument.

D. Mortality (attrition) - differential **loss of research participants** from the beginning to the end of a research study

E. Maturation – **internal changes** that occur in people over the course of the study (e.g. age)

F. Intersubject bias – occurs when people being studied **influence one another**

III. **Threats due to Researchers** - researcher influences people's responses

A. Researcher Personal Attribute Effect – particular characteristics of a researcher influence subject behavior

B. Researcher Unintentional Expectancy Effect (Rosenthal or Pygmalion effect) – influence subject responses by inadvertently letting them know the behavior they desire; researchers lead participants to behave or respond in particular ways

C. Researcher Observational Biases – demonstrate of inaccuracies during the observational process
Observer drift – become inconsistent in criteria used;
Observer bias – research knowledge influences observations
Halo effect – overrate or underrate subjects due to multiple judgments of same person over time