

# *Research Design*

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# Definition of Research Design

- ▶ A set of advance decisions that make up the master plan specifying the methods and procedures for collecting and analyzing the needed information.
- ▶ This is the plan of carrying out the research exercise. It is an outline of the approaches to be used in answering research questions. Research design provides the glue that holds the research project together.
- ▶ A plan of what data to gather, from whom, how and when to collect the data, and how to analyze the data obtained and final reporting

# Philosophical approaches to Research Design

- ▶ **Positivistic Research Design** -believe that there are facts that can be proven, reality is the same for each person (for example, patient weight is the same regardless of who measured it),
- ▶ **Phenomenalistic Research Design** - to seek reality from individuals' narratives of their experiences and feelings, and to produce in-depth Interpretive descriptions of the phenomenon.

# Types of Research Designs

**Depending on research philosophy there two main research designs**

- **Quantitative Research Design-** This is positivistic and employs numerical analysis using numbers, frequencies and other numerical computations.
- **Qualitative Research Design-** This is Phenomenalistic and involves interviews and thematic analysis

# Types of Research Designs(Cond

- ▶ Causal design-this one is targeted towards determining the cause and effect relationship.
- ▶ Cross sectional design- this is a snapshot design, in that it focuses on one point in time. e.g. studying events that happened a certain year in the past.
- ▶ Longitudinal design- for this, a study is carried out taking into account all the years, or events or items one after another.

# Research Methods

**Systematic and scientific approaches used to collect, analyze and interpret data to answer research questions or test hypotheses**

# Types of Research Methods

## ► Quantitative Methods

- Survey- here a study is done on a number of things, item, individuals, or institutions.
- Field study-you choose a few items among the many and study them well.
- Experimental- this involves testing and controlling some factors in order to influence out come
- Correlation - with this, the main purpose is to establish association and relationships between variables.

# Types of Research Methods (Cont'd)

## ► Qualitative Methods

- Case study-consideration is put on one institution to represent the others.
- Content Analysis texts, videos to identify patterns and themes
- Ethnography- stay in a community to gain deeper understanding.



# Types of Research Methods (Cont'd)

## ► Mixed Methods

- Combining Quantitative and Qualitative Methods. Data is triangulated to increase validity and reliability of results.

# Characteristics of a good RD

- 1. A good research design is an ethical research design;**
- 2. A good research design is one that is capable of obtaining the most reliable and valid data;**
- 3. A good research design is one that is capable of measuring any odd events in any circumstances;**
- 4. A good research design is one that helps an investigator avoid making mistaken conclusions;**
- 5. A good research design is one that can adequately control the various threats of validity, both internal and external.**