

**RESEARCH**  
**APPROACH &**  
**DESIGN**

# DEFINITION

- The research design is the **master plan specifying the methods & procedures** for collecting & analyzing the needed information in a research study.

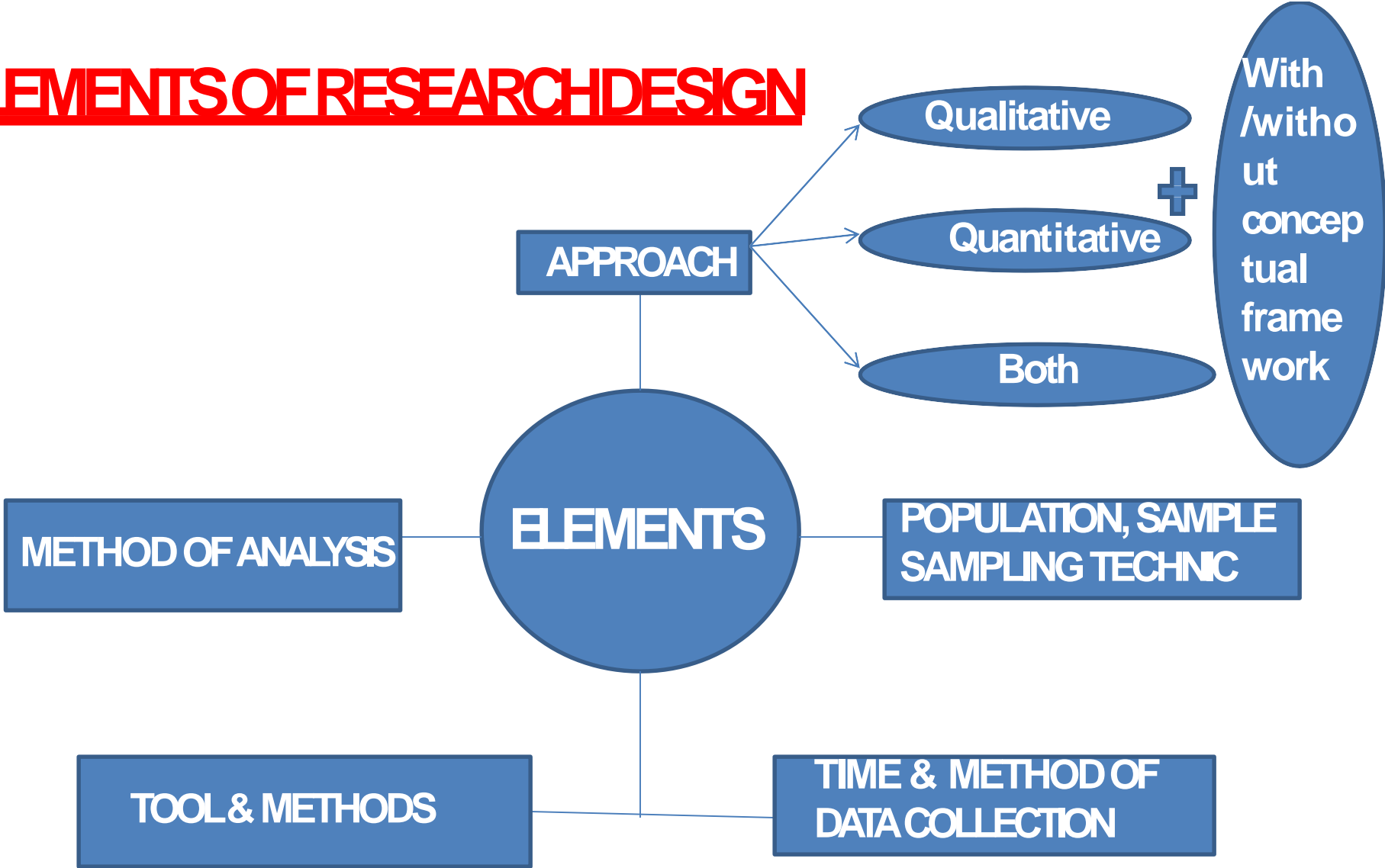
- **Research design can be defined as a blue print to conduct a research study, which involves the description of research approach, study setting, sampling size, sampling technique, tool & methods of data collection & analysis to answer specific research questions or for testing research hypothesis**

- **Research design is a plan of how & where data are to be collected & analyzed.**

- **Research design is the researcher's overall plan for answering the research questions or testing the research hypotheses.**

**ELEMENTS OF**  
**RESEARCH DESIGN**

# **ELEMENTS OF RESEARCH DESIGN**



# **SELECTION OF RESEARCH DESIGN**

- **FACTORS AFFECTING RESEARCH  
DESIGN**

**CONT...**



- 1. Nature of the research problem.**
- 2. Purpose of the study.**
- 3. Researcher's knowledge & experience.**
- 4. Researcher's interest & motivation.**
- 5. Research ethics & principles.**

**6. Subjects & participants.**

**7. Resources.**

**8. Time.**

**9. Possible control on extraneous variables.**

**10. Users of the study findings.**

# **VALIDITY OF RESEARCH DESIGNS**

**1. INTERNAL VALIDITY.**

**2. EXTERNAL VALIDITY.**

# **INTERNAL VALIDITY**

## **THREATS TO INTERNAL VALIDITY**

- 1. History.**
- 2. Maturation of subjects.**
- 3. Testing.**
- 4. Instrumentation change.**
- 5. Mortality.**
- 6. Selection bias.**

# **EXTERNAL VALIDITY**

## **FACTORS AFFECTING EXTERNAL VALIDITY**

- 1.Hawthorne Effect.**
- 2.Experimental Effect.**
- 3.Reactive effect of pre test.**
- 4.Novelty effect.**
- 5. People.**
- 6. Place.**
- 7. Time**

# TYPES

# RESEARCH DESIGN

# TYPES

```
graph TD; A[TYPES] --> B[QUANTTTATIVE RESEARCH DESIGN]; A --> C[QUALITATIVE RESEARCH DESIGN];
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**QUANTTTATIVE  
RESEARCH  
DESIGN**

**QUALITATIVE  
RESEARCH  
DESIGN**

**QUANTTTTATIVE**

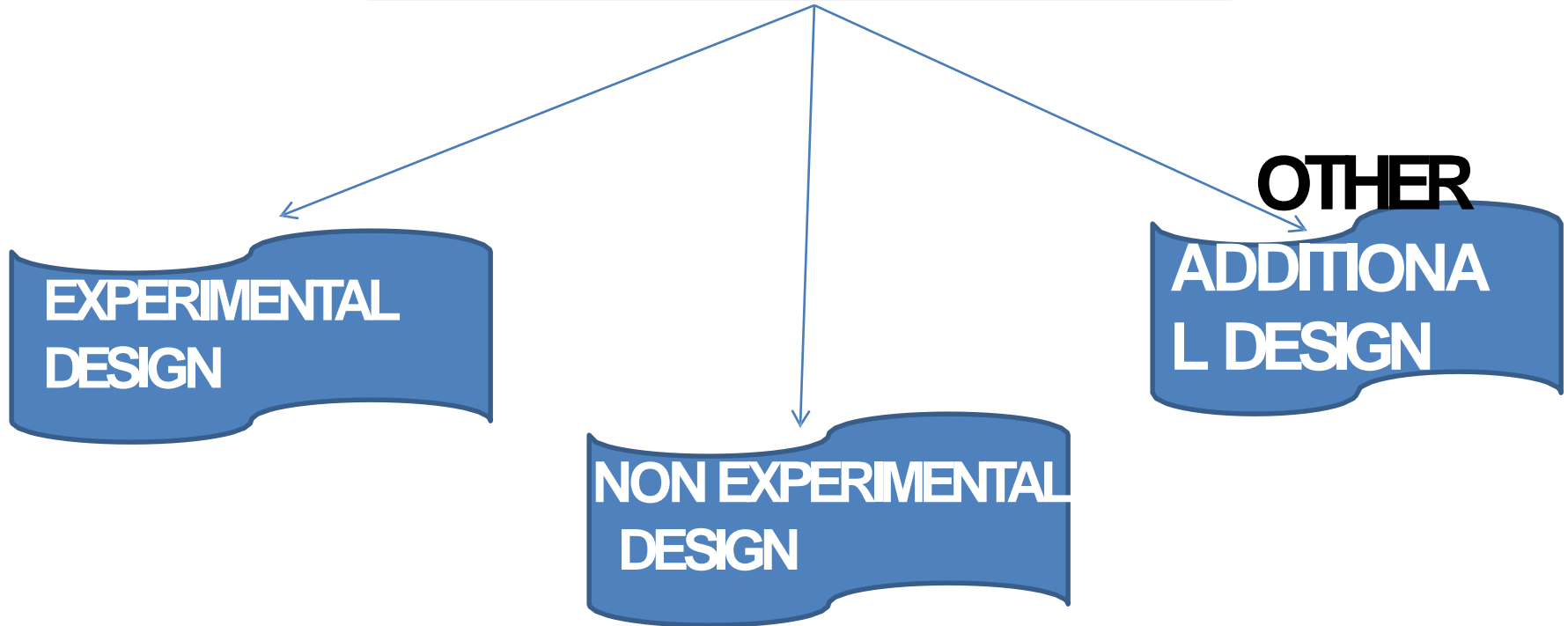
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**RSEARCH DESIGNS**

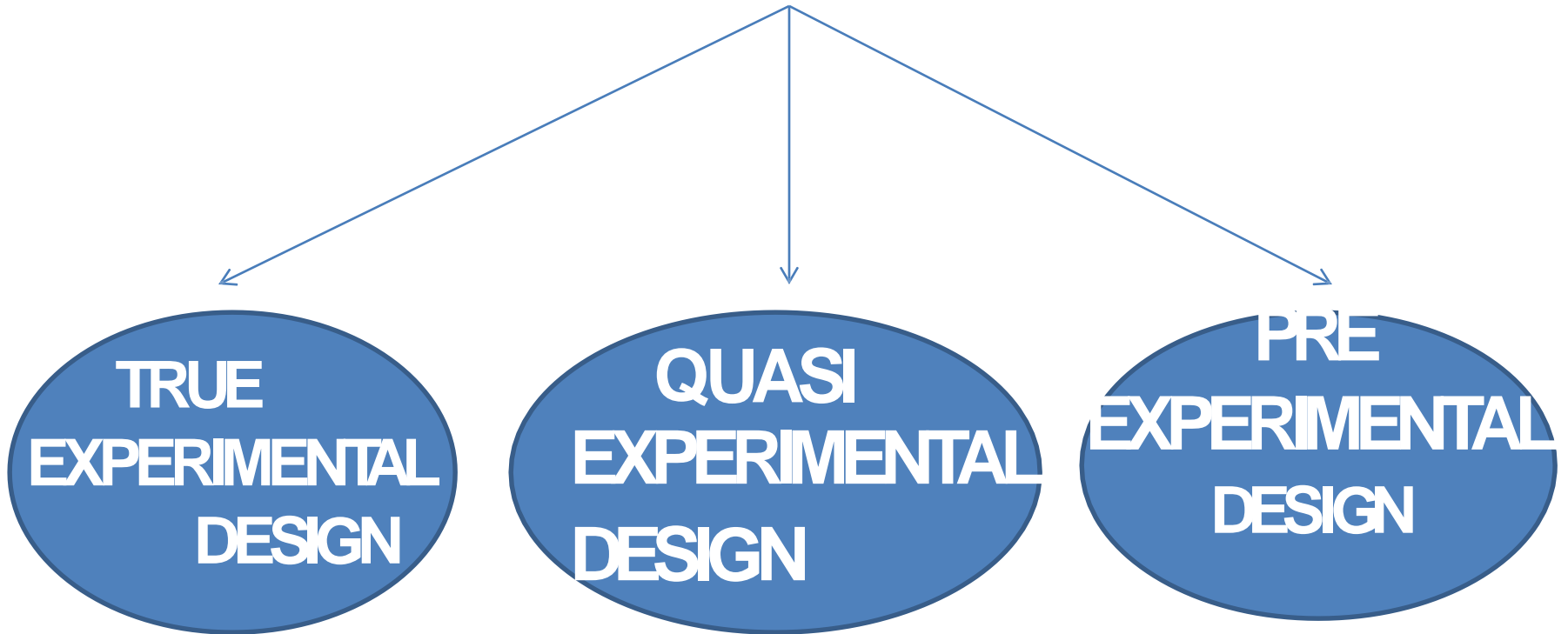
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# TYPES OF QUANTITATIVE RESEARCH DESIGN



# EXPERIMENTAL DESIGNS



**EXPERIMENTAL**

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**RESEARCH**

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**DESIGNS**

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# FEATURES

| CATEGORY                     | RESEARCH DESIGN  | FEATURES  |
|------------------------------|--|---|
| EXPERIMENTAL RESEARCH DESIGN | <p><b><u>TRUE EXPERIMENTAL DESIGN:</u></b></p> <ul style="list-style-type: none"><li>1. Post-test-only control design</li><li>2. Pre –test-post test control group design</li><li>3. Solomon four-group design</li><li>4. Factorial design</li><li>5. Randomized block design</li><li>6. Cross over design</li></ul> | <ul style="list-style-type: none"><li>1. MANIPULATION OF INDEPENDENT VARIABLE, IN THE PRESENCE OF CONTROL GROUP.</li><li>2. RANDOMIZATION</li></ul> |
|                              |  |   |
|                              |  |   |

| CATEGORY                     | RESEARCH DESIGN   | FEATURES  |
|------------------------------|---|---|
| EXPERIMENTAL RESEARCH DESIGN | <p><b><u>QUASI EXPERIMENTAL DESIGN:</u></b></p> <p>1. Non randomized control group design.</p> <p>2. Time series design</p> | <p>1. Manipulation of independent variable</p> <p>2. absence of either randomization or control group</p> |

| CATEGORY                                   | RESEARCH DESIGN  | FEATURES  |
|--|--|---|
| <p><b>EXPERIMENTAL RESEARCH DESIGN</b></p> | <p><b><u>PRE EXPERIMENTAL DESIGN:</u></b></p> <p>1. One shot case design</p> <p>2. One group pre test post test design</p> | <p>1. Manipulation of independent variable</p> <p>2. Limited control over extraneous variables</p> <p>3. No randomization &amp;</p> |

**NON**  
**EXPERIMENTAL**  
**RESEARCH**  
**DESIGNS**

# DESIGNS

| CATEGORY                                    | RESEARCH DESIGN  |
|---|--|
| <b>NON EXPERIMENTAL<br/>RESEARCH DESIGN</b> | <b>1.DESRIPTIVE DESIGN.</b><br><br><b>2.CORRELATIONAL DESIGN \ EX<br/>POST FACTO DESIGN</b><br><br><b>3.DEVELOPMENTAL RESEARCH<br/>DESIGN</b><br><br><b>4.EPIDEMIOLOGICAL DESIGNS</b><br><br><b>5.SURVEY RESEARCH DESIGN</b> |



# DESCRIPTIVE DESIGN

| TYPE  | FEATURE   |
|---|---|
| <b>1.UNIVARIENT<br/>DESCRIPTIVE DESIGN</b>  | <b>ACCURATE DESCRIPTION<br/>OF CHARACTERISTICS OF<br/>INDIVIDUAL, SITUATION,<br/>OR GROUP &amp;</b> |
| <b>2EXPLORATORY<br/>DESCRIPTIVE DESIGN</b>  | <b>THE FREQUENCY WITH<br/>WHICH A CERTAIN<br/>PHENOMENON OCCURS<br/>IN A NATURAL SETTING</b>        |
| <b>3.COMPARITIVE<br/>DESCRIPTIVE DESIGN</b> | <b>WITHOUT IMPOSING ANY<br/>CONTROL OR<br/>MANIPULATION.</b>  |

# DESCRIPTIVE DESIGN

# FEATURE

**UNIVARIANT  
DESCRIPTIVE  
DESIGN**

**Studies undertaken to describe the frequency of occurrence of a phenomenon rather than to study relationship**

**DESCRIPTIVE  
DESIGN**

**FEATURE**

**EXPLORATORY  
DESCRIPTIVE  
DESIGN**

**Investigating the  
phenomenon &  
its related  
factors about  
which very little  
is known**

**DESCRIPTIVE  
DESIGN**

**FEATURE**

**COMPARITIVE  
DESCRIPTIVE  
DESIGN**

**CPMPARING  
OCCURANCES  
OF A  
PHENOMENON  
IN TWO OR  
MORE GROUPS**

# CORRELATIONAL DESIGN

## CORRELATIONAL DESIGN

## FEATURE

**1. PROSPECTIVE DESIGN**

**2. RETROSPECTIVE DESIGN**

**EXAMINING THE RELATIONSHIP BETWEEN TWO OR MORE VARIABLES IN A NATURAL SETTING WITH OUT MANIPULATION OR CONTROL ( CAUSE & EFFECT RELATIONSHIP)**

# DEVELOPMENTAL RESEARCH DESIGN

| DEVELOPMENTAL RESEARCH DESIGN   | FEATURE  |
|---|--|
| <p data-bbox="117 422 749 568"><b>1. CROSSSECTIONAL DESIGN</b></p> <p data-bbox="117 691 909 751"><b>2. LONGITUDINAL DESIGN</b></p> | <p data-bbox="987 422 1667 658"><b>EXAMINING THE PHENOMENON IN RESPECT TO THE TIME.</b></p> <p data-bbox="987 691 1634 751"><b><u>1.CROSS SECTIONAL:</u></b></p> <p data-bbox="987 779 1773 1015"><b>Examining the phenomenon only at one point in time.</b></p> <p data-bbox="987 1043 1541 1103"><b><u>2.LONGITUDINAL:</u></b></p> <p data-bbox="987 1132 1702 1368"><b>Examining the phenomenon at more than one point in time.</b></p> |

# EPIDEMIOLOGICAL DESIGNS

**EPIDEMIOLOGICAL DESIGN**

**FEATURE**

**1.CASE CONTROL STUDIES**

**2.COHORT STUDIES**

**THE INVESTIGATION OF DISTRIBUTION & CAUSES OF DISEASES IN A POPULATION**

# **SURVEY RESEARCH DESIGN**

**SURVEY RESEARCH  
DESIGN**

**FEATURE**

**SURVEY STUDIES ARE  
INVESTIGATION IN WHICH  
SELFREPORTED DATA ARE  
COLLECTED FROM  
SAMPLE .....WITH THE**

**PURPOSE OF DESCRIBING  
POPULATION ON SOME  
VARIABLES OF INTEREST**



**OTHER**

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**ADDITIONAL**

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**DESIGN**

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# DESIGNS

| CATEGORY                                 | RESEARCH DESIGN  |
|--|--|
| <b>OTHER ADDITIONAL RESEARCH DESIGNS</b> | <b>1. METHODOLOGICAL STUDIES</b><br><b>2. META ANALYSIS</b><br><b>3. SECONDARY DATA ANALYSIS</b><br><b>4. OUTCOME RESEARCH</b><br><b>5. EVALUATION STUDIES</b><br><b>6. OPERATIONAL RESEARCH</b> |

## CATEGORY

**OTHER ADDITIONAL  
RESEARCH DESIGNS**

## RESEARCH DESIGN

**7.PHENOMENOLOGICAL  
RESEARCH**

**8.ETHNOGRAPHIC  
RESEARCH**

**9.GROUNDED THEORY**

**10.CASE STUDIES.**

**11.HISTORICAL  
RESEARCH**

**12.ACTION RESEARCH**

# **METHODOLOGICAL STUDIES**

| <b>METHODOLOGICAL STUDY</b> | <b>FEATURE</b>   |
|-----------------------------|--|
|                             | <b>RESEARCH<br/>CONDUCTED TO<br/>DEVELOP, TEST &amp;<br/>EVALUATE THE<br/>RESEARCH<br/>INSTRUMENTS &amp;<br/>METHODS</b> |

# META ANALYSIS

**META ANALYSIS**

**FEATURE**

**QUANTITATIVELY  
COMBINING &  
INTEGRATING THE  
FINDINGS OF THE  
MULTIPLE  
RESEARCH STUDIES  
ON A PARTICULAR  
TOPIC**

# SECONDARY DATA ANALYSIS

SECONDARY DATA  
ANALYSIS

FEATURE

A RESEARCH DESIGN IN WHICH THE DATA COLLECTED IN ONE RESEARCH IS REANALYZED BY ANOTHER RESEARCHER, USUALLY TO TEST A NEW HYPOTHESIS

# OUT COME RESEARCH

OUT COME RESEARCH

FEATURE

OUTCOME RESEARCH  
INVOLVES THE  
EVALUATION OF CARE  
PRACTICES & SYSTEMS  
IN PLACE  
IT IS USED IN NURSING  
TO DEVELOP  
EVIDENCED BASED  
PRACTICE & IMPROVE  
NURSING ACTIONS

# **EVALUATION STUDIES**

## **EVALUATION STUDIES**

## **FEATURES**

**IT IS A RESEARCH DESIGN WHICH INVOLVES THE JUDGMENT ABOUT SUCCESS OF A PROGRAMMES, PRACTICES, PROCEDURES, OR POLICIES**



# OPERATIONAL RESEARCH

## OPERATIONAL RESEARCH

## FEATURE

INVOLVES THE STUDY OF COMPLEX HUMAN ORGANIZATIONS & SERVICES TO DEVELOP NEW KNOWLEDGE ABOUT INSTITUTIONS, PROGRAMMES, USE OF FACILITIES & PERSONNEL IN ORDER TO IMPROVE WORKING EFFICIENCY OF AN ORGANIZATION

**QUALITATIVE**

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**RESEARCH**

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**DESIGNS**

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# PHENOMENOLOGICAL RESEARCH

PHENOMENOLOGICAL  
RESEARCH

FEATURE

PHENOMENOLOGICAL RESEARCH  
EXAMINES HUMAN  
EXPERIENCES  
THROUGH THE  
DESCRIPTIONS  
PROVIDED BY  
PEOPLE INVOLVED.

# **ETHNOGRAPHIC RESEARCH**

## **ETHNOGRAP HIC RESEARCH**

## **FEATURES**

**INVOLVES THE  
INFORMATION COLLECTED  
FROM CERTAIN CULTURAL  
GROUPS, BY LIVING WITH  
PEOPLE OF THOSE GROUPS  
& FROM THEIR KEY  
INFORMANTS, WHO ARE  
BELIEVED TO BE THE MOST  
KNOWLEDGEABLE ABOUT  
THE SELECTED CULTURE**

# GROUNDING THEORY

GROUND  
ED  
THEORY

FEATURES

GROUNDING  
THEORY

Theory is developed inductively from a corpus of data acquired by a participant observer

# CASESTUDIES

CASESTUDIES

FEATURES

CASESTUDIES

Research on a phenomenon by **studying in depth a single case example.** The case can be **an individual person, an event, a group or an institution.**

# **HISTORICAL RESEARCH**

| <b>HISTORICAL RESEARCH</b> | <b>FEATURE</b>   |
|----------------------------|--|
| <b>HISTORICAL RESEARCH</b> | <p><b>Systematic collection &amp; objective evaluation of data related to past occurrences in order to test hypotheses</b></p> <p><b>concerning causes, effects, or trends of these events that may help to explain present events &amp; anticipate future events.</b></p> |

# ACTION RESEARCH

**ACTION  
RESEAR  
CH**

**FEATURES**

**ACTION  
RESEARCH**

**Seeks action to  
improve  
practices &  
study the effect  
of the action  
that was taken**





**THANK YOU**