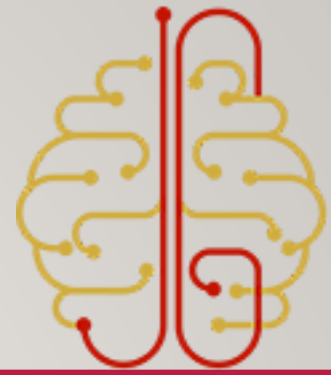


JGU
UNIVERSITY
EXCELLENCE BY CHOICE

TRAINING SESSION ON RESEARCH METHODOLOGY

ELEMENTARY CONCEPTS

DESCRIPTIVE **VERSUS** ANALYTICAL RESEARCH



- Which continent has had the highest rate of inflation in last five years?
- Why was the inflation highest in Zimbabwe during the last five years?

PURE EXPERIMENTS **VERSUS** QUASI EXPERIMENTS



- Examining the impact of **new medicine** on **hypertension patients** in Zydus Hospital (20 patients)
- Examining the impact of **Smoking** on **Lungs Health**

LONGITUDINAL RESEARCH **VERSUS** CROSS SECTION RESEARCH



**Impact of NGO Programs on
Income Level of the Tribal People**

**Comparing the Incomes before and
after joining the NGO**

**Comparing the Incomes of the
Beneficiaries with the Non-
Beneficiaries**

Longitudinal Research

Cross Section Research

EXTRANEOUS VARIABLE



- Those who received the **new treatment** **reduced** their **hyper-tension** significantly as compared to those who received the **old treatment**.
- However, the reduction in the hyper tension among those who received the new treatment was not only because of the new treatment. They had also taken **healthy diet** and performed **physical exercise** during the same period, about which the researcher was unaware.
- In this experiment, the **healthy diet** and **physical exercise** were the **extraneous variables**.

VALIDITY **VERSUS** RELIABILITY OF RESEARCH

- A research is **valid** if *it measures what it is supposed to measure*. However, sometimes due to the existence of **extraneous variables**, this becomes very difficult.
- The research was aimed at measuring the impact of **new treatment** on the **hypertension levels of the patients**. But it ended up measuring the impact of **new treatment, physical exercise and healthy diet** on the **hypertension levels** of the patients.
- Reliability= Consistency

STANDARD DEVIATION: DISTANCE FROM THE MEAN



Name	M Income
A	10,000
B	50,000
C	40,000
D	45,000
E	47,000
MEAN	38,400

Name	M Income
A	10,000
B	20,000
C	10,00000
D	30000
E	35000
MEAN	2,19,000

SKEWNESS



- It studies departure from symmetry
- Greater the departure from symmetry, higher is the skewness

**NORMAL DISTRIBUTION: IF EQUAL NUMBER OF ITEMS ARE
> AND < MEAN, THE DATA IS NORMALLY DISTRIBUTED.
THERE IS NO SKEWNESS.**

- E.g. height and weight
- 50,60,70,80,90 (Mean= Median=Mode)

POSITIVE SKEWED: IF THERE ARE ONLY A VERY FEW ITEMS WAY HIGHER THAN THE REST, THE DATA IS POSITIVELY SKEWED OR RIGHT SKEWED.

e.g. Wealth Distribution- a very few people are extremely wealthy as compared to the central value. (10,20,30,40,50, **150, 180**)

When a very few items are much higher than the central value.



NEGATIVE SKEWED: IF THERE ARE ONLY A VERY FEW ITEMS WAY LOWER THAN THE REST, THE DATA IS NEGATIVELY SKEWED OR LEFT SKEWED.

E.g. Life span of the human beings. A very few people die too early than the average life expectancy.

1, 2, 50, 60, 70, 80

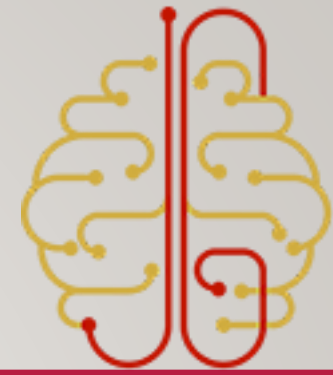
MEAN, MEDIAN AND MODE



Name	Monthly Expenses (Rs.)
1.A	50,000
2.B	54,000
3.C	60,000
4.D	50,000
5.E	50,000
6.F	57,000
7.G	63,000

Name	Monthly Expenses (Rs.)
A	50,000
D	50000
E	50000
B	54,000
F	57,000
C	60,000
G	63,000

ETHNOGRAPHIC RESEARCH



- A kind of research in which the researcher would **live or stay** with the **subjects** to make the **observations** and **interactions** with them to find out something about them.

REVIEW OF LITERATURE



- It is the review of the already existing literature on your own topic.
- It helps the researcher understand the work which has been already done on his/her topic by the other scholars.

S.P.S.S.



-
- Statistical Package for Social Sciences

PRIMARY **VERSUS** SECONDARY DATA



- The data which is **created** and **collected** by the **researcher himself**. E.g. through questionnaires, interviews etc
- The data which is **created by someone else** and **used by the researcher** for his own work or research e.g. annual reports of the companies, population census, Inflation rates in RBI bulletin etc

PILOT STUDY



- A pilot study is the first step of the entire research protocol and is often a smaller-sized study assisting in planning and modification of the main study
- They are helpful in identifying potential issues early, which can then be rectified before committing to the length and expense of a full investigation.