DATA GATHERING TOOLS AND METHODS

1. Definition

Data are the observable and measurable facts that provide information about the phenomenon under study. A quality of research studies requires that highly reliable and valid data. Information collected from different research studies generally depends on various sources like primary and secondary sources.

2. Types of Sources

In research studies two types of data are collected primary and secondary.

➢ **Primary Sources:** Data directly collected from research units, which may be individuals, objects or programs. They provide the first hand information that is collected by the researcher directly from the respondents or the situations which may be collected through interviews, questioning, observation, etc….

➢ **Secondary Sources:** They are data collected from either internal or external secondary sources. External sources involved existing materials such as published or unpublished records which include journals, magazines, dissertations etc. Internal secondary sources are also known as private documents may include bio graphics, personal diaries, letters, etc…

3. Methods and Tools of Data Collection

3.1. Questionnaire: A questionnaire is structured instrument consisting of a series of questions prepared by researcher to gather data from individuals about knowledge, attitude and feeling. Questionnaires facilitate the collection of data by asking all, or a sample of people, to respond to the same questions. They can be in both printed and electronic forms. The researcher can use different types of questions to design a questionnaire:

➢ **Open Ended Questions:** They are the questions which provide opportunity to the respondents to express their opinions and answers in their own way.

> **Closed Ended Questions:** These questions offer respondents a number of alternative replies, from which the subjects must choose the one that most likely matches the appropriate answer.

> **Dichotomous Questions:** This requires respondents to make a choice between two responses such as yes or no, true or false.

> **Multiple Choice Questions:** These questions require respondents to make a choice between more than two responses.

> **Rank Order Questions:** These questions ask respondents to rank their responses from most favorable to least favorable.

> **Contingency Questions:** A question is asked further only if the respondent gives a particular response to previous question. Ex: Q: Are you stressed? • No • Yes If yes Why………………..

3.2. Interview: An interview is a conversation between two or more people, where questions are asked by the interviewer to obtain information from the interview. It may be defined as the two way systematic conversation between an investigator and an informant initiated for obtaining information relevant to specific study. There are various types of interviews:

> **Structured Interview:** It is a mean of data collection in which the interview made with a detailed, standardized schedule. Same questions are put to all the respondents and in the same order. It is formalized and has limited set of questions, and it increases the reliability and credibility of research data.

> **Unstructured Interview**: It is a method where in questions can be changed to meet the respondent's intelligence, understanding and beliefs. Questions are changed based on how each individual person responds to the questions. It is not formalized, and it has open ended questions.

> **Semi Structured Interview**: It is a flexible method that allows new questions to be brought up during the interview depending upon the situation. Interviewer prepares an interview

guide, which is an informal list of topics and questions that the interviewer can ask in different ways from different participants.

➢ **In depth Interview**: This is an intensive and investigative interview conducted and aimed at studying the respondent's opinion and emotions on the basis of interview guide.

➢ **Focused Group Interview:** It is an unstructured group interview technique where 8-12 members are brought together under the guidance of the trained interviewer, to focus on a specific phenomenon.

3.3. Observations: It is a way of gathering data by watching behavior, events or noting physical characteristics in their natural settings. Observations can be **overt** (everyone knows that they are being observed) or **covert** (everyone does not know that they are being observed). It is a technique for collecting all the data or acquiring information on individual behavior or interaction between people. The main types of observation are as follows:

➢ **Structured Observation:** In this researcher in advance prepares a structured or semi structured tool to observe the phenomenon under study. It is generally carried out by using tools like checklist, rating scale etc.

➢ **Unstructured Observation:** It is used for complete and nonspecific observation, which is very well known by the researcher. The tools are used by researcher are Log and field notes, Anecdotes, Field diary.

➢ **Participant Observation:** In this observer may live or work in field and actively participate in ongoing activities for the extended period.

➢ **Non Participant Observation:** In this observer works as an eaves dropper (secretly listening or observing), where an attempt is made to observe people without interacting with them.