### QUANTITATIVE DATA COLLECTION METHOD

This type of data deals with things that are measurable and can be expressed in numbers or figures, or using other values that express quantity. Quantitative data is usually expressed in numerical form and can represent size, length, duration. Quantitative survey questions are in most cases closed-ended and created in accordance with the research goals, making the answers easily transformable into numbers, charts, graphs, and tables.

The data obtained through quantitative data collection methods can be used to test existing ideas or predictions, learn about your clients, measure general trends, and make important.

**Some of the most common quantitative data collection techniques includes**

**.** Questionnaires survey (With close ended question).

**.** Experiments/clinical trials.

**.** Observing and recording well-defined events (e.g., average waiting time to see a doctor).

**.** Obtaining relevant data from management information systems.

**Questionnaire survey**

Surveys usually involve a representative sample of the population, using a technique like random sampling. A questionnaire is given to each members of the sample and used to infer characteristics of the whole population. Surveys are easy in theory but can be difficult to put into practice, mainly because of a typical response rate.

**Experiment:** an experiment is where you deliberately manipulate one variables (the independent variable) to see what the outcome is on another variable (the independent variable). Experiments are typically performed in a closed settings laboratory.

**Observational study:** A type of study where the researcher observes participants without any kind of interference. Participants are placed into two groups with one control group and one experimental group (i.e smokers and non- smokers)

**Main characteristics of quantitative data collection method are:**

**.** The data is usually gathered using structured research instrument

**.** The results are based on larger samples sizes that are representative of the population

**.** The research study can usually be replicated, given its high reliability

Data are in the form of numbers and statistics, often arranged in tables, charts, figures or other non-textual form

**EXAMPLES OF QUANTITATIVE DATA ( NUMERICAL”)**

Height of a patient

Weight of a baby

Age of pregnant women

Temperature of patients (200f0)

### QUALITATIVE DATA

Quantitative data deals with numbers and figures, it is descriptive in nature rather than numerical. Qualitative data is usually not easily measurable as quantitative and can be gained through observation or open-ended survey or interview questions.

As mentioned, qualitative data collection methods are most likely to consist of open-ended questions and descriptive answers and little or no numerical value. Qualitative data is an excellent way to gain insight into your audience’s thoughts and behavior (maybe the ones you identified using quantitative research, but wasn’t able to analyze in greater detail).

Data obtained using qualitative data collection methods can be used to find new ideas, opportunities, and problems, test their value and accuracy, formulate predictions, explore a certain field in more detail, and explain the numbers obtained using quantitative data collection techniques.

**Some of the most common qualitative data collection techniques includes** .

**.** Ethnography/Case studies Life Histories- biographies Participant Observation- lives and takes part

**.** Non-Participant observation

**.** Focus Group Discussion

**.** Group Interviews

**.** In-depth Interviews

**.** Semi-Structured Interviews

#### . 1-on-1 Interviews

One-on-one (or face-to-face) interviews are one of the most common types of data collection methods in qualitative research. Here, the interviewer collects data directly from the interviewee. Due to it being a very personal approach, this data collection technique is perfect when you need to gather highly-personalized data.

Depending on your specific needs, the interview can be informal, unstructured, conversational, and even spontaneous (as if you were talking to your friend) – in which case it’s more difficult and time-consuming to process the obtained data – or it /can be semi-structured and standardized to a certain extent (if you, for example, ask the same series of open-ended questions).

#### . Focus groups

The focus groups data collection method is essentially an interview method, but instead of being done 1-on-1, here we have a group discussion.

Whenever the resources for 1-on-1 interviews are limited (whether in terms of people, money, or time) or you need to recreate a particular social situation in order to gather data on people’s attitudes and behaviors, focus groups can come in very handy.

Ideally, a focus group should have 3-10 people, plus a moderator, depending on the research goal and what the data obtained is to be used for, there should be some common denominators for all the members of the focus group.

For example, if you’re doing a study on the rehabilitation of teenage female drug users, all the members of your focus group have to be girls recovering from drug addiction. Other parameters, such as age, education, employment, marital status do not have to be similar.

#### . Direct observation

Direct observation is one of the most passive qualitative data collection methods. Here, the data collector takes a participatory stance, observing the setting in which the subjects of their observation are while taking down notes, video/audio recordings, photos e.t.c.

Due to its participatory nature, direct observation can lead to bias in research, as the participation may influence the attitudes and opinions of the researcher, making it challenging for them to remain objective.

**Characteristics of qualitative data collection method**

**.** Findings are judged by whether they make sense and are consistent with the collected data.

**.** Results are validated externally by how well they might be applicable to other situations.

**.** Data is usually collected from small, specific and non- random samples.

**EXAMPLES OF QUALITATIVE DATA(CATEGORICAL)**

Happiness rating

Gender

Eye color

Temperature of a coffee (very hot).