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6. Methods and Techniques of Data Collection

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6.1 Introduction:

After deciding on a "Research Design," the researcher must gather data. To make data meaningful, our observations must be arranged in a way that allows us to identify trends and draw logical conclusions.

To ensure that all pertinent groups are represented in the data, statistical analysis necessitates the methodical collection of data. 500 customers in a specific region might be examined by a researcher to ascertain the possible market for a new product, like Sandhya.

It is necessary to determine whether the group consists of individuals who reflect various factors, like neighbourhood, race, education, and income level.

Since the quality of the data will have a significant impact on the results, this procedure needs to be given the utmost significance, and every effort should be made to ensure accuracy when gathering and collecting data.

The statistical data can be divided into two groups based on the sources used, whether the information is derived from actual observations or from records that are maintained for routine reasons. These classifications are

6.2 Primary Data and Secondary Data:

Primary Data: Information gathered by the researcher directly for a particular investigation or study is referred to as primary data. These are unique statistics that come from surveys that are carried out by individuals or research organizations.

Secondary Information

Secondary data is information that has previously been gathered by another party and is used by an investigator. For the organization that collected the data, it is primary data; but, when someone else utilizes it for their own goals, it becomes secondary data. Journals, reports, government papers, publications from professional and research organizations, and so forth are good sources of secondary data.

For instance, the meteorology department's records contain the necessary information or data for a researcher who wants to analyze the weather in various locations.

How Primary and Secondary Data are Different:

Sr. No	Description	Primary Data	Secondary Data
1.	Source	Source	Secondary source
2.	2 Methods of data collection	Observation method, questionnaire method, Trade Journal, etc	Published data from Govt. agencies
3.	Statistical process	Not Done	Done
4.	Originality of Data	Original first time collected by a user	No data are collected by some other agency
5	Terms and definition of units	Incorporated	Not include
6	Copy of the schedule	Included	Excluded
7	Method of data collection	Given	Not given
8	Timer	More	Less
9	Cost	Expensive	Cheaper
10	Cost	Expensive	Cheaper
11	Accuracy	More accurate	Less accurate
12	Training personnel required	Expert/trained required	Less trained personnel

6.3 Data Collection Procedure for Primary Data:

The different actions that are involved are:

- Organizing the research
- Data gathering techniques;
- Sample selection;
- Primary data editing

A. Organizing the Research:

Establishing a robust investigation procedure is crucial to guarantee that the data is impartial and highly representative, as the quality of information gathered affects the quality of outcomes obtained from statistical data. These calls for a high level of expertise, and it might also need some safety precautions.

B. Data Gathering Techniques:

Primarily, there are three commonly employed techniques for gathering primary data:

- Questionnaire;
- Experimentation;

- Observation

C. Primary Data—Observation Process:

A few instances of how information is gathered through process observation at work are as follows.

a. Services station: Go to a services station and observe while assuming the role of a consumer.
b. An observer records
    - The number of people who pass by and
c. The number of people who stop to look at the sleep-well cushion display in a department shop to assess its effectiveness. 144
    - The number of people who choose to purchase.
d. Supermarket: Where on the shelf is the ideal place for it? There are covert cameras employed.
e. Came with a hidden tape recorder to record typical sales disputes and learn about the different salesmen's levels of zeal.

Response Bias is Removed Using This Technique:

The approaches can be used to research client response, customer movements, sales tactics, etc. However, information on the customer's or consumer's mindset, reasons for purchasing, and self-image is withheld. It's unclear how much money and education they have. The investigator must also wait for specific portions to occur, which takes time.

D. Primary Data:

Experimentation Method: Observation in secondary research or gathering feedback from experts or clients is insufficient for resolving several crucial decisions that face marketing executives. The following scenarios can make use of the experimental method.

a. Which training approach works best for salespeople?
b. What salesman compensation plan is the best?
c. How should a product be arranged on shelves to best showcase it?
d. How successful is a point-of-purchase display?
e. Which package design ought to be employed?
f. What is the most successful copy? What kind of media works best?
g. Which product version would customers prefer?

The experimental units in a marketing experiment could include customers, retail locations, sales regions, etc. The researcher can regulate factors or marketing variables such as price, packaging, display, sales incentive plan, flavour, colour, shape, and so on.

The activities of competitors, such as modifications to cooperative dealers, etc., are environmental influences.

A sizable sample size is required to examine the impact of the marketing variables in the context of environmental conditions, and occasionally a control group is excluded. The sole way a control group differs from an experimental group is that they do not receive any therapy.

A marketing experiment's outcome or response will manifest itself in sales, attitudes, or behaviour.

E. Primary Data:

Questionnaire Technique: The survey method is a way to collect data by asking people who are assumed to possess the necessary information a series of informal questions.

Benefits Surveys provide a wider range of information and are useful in producing information on socioeconomic characteristics, attitudes, opinions, motives, and other related topics. These data can be used to plan product features, advertising copy, advertising media, sales promotions, channels of distribution, and other marketing variables. One cannot determine why a buyer purchases a product or what his opinion about it is compared with either direct observation or experimentation. Asking questions is typically less expensive and faster than watching.

F. Primary Data Collection Limitations:

a. Respondents' reluctance to divulge information: This calls for the interviewer to use persuasive techniques. The interviewer may promise to keep the information private or may provide a presentation.
b. The respondents' incapacity to supply information: This could be because of
c. I Lack Information; ii) Memory Loss; iii) Incapacity to discern their intentions and provide evidence for their acts.
d. The respondent's human biases, such as ego, etc.
e. Semantic challenges: It can be challenging, if not impossible, to phrase a question so that each respondent will understand it in the same way. Likewise, asking the same question in two different ways will usually get very different answers.

- deliberate Question wording.
- Vigilant supervision of the data collection process through the use of specialized investigators who will pay close attention and document the nuanced responses of those questioned. 146
- Cautions interpretation based on an awareness of the data's limits and a precise comprehension of what the data reflect. This is particularly valid for answers to inquiries such as.
- Viewing the facts as relative as opposed to absolute. According to a dentifrice survey, 60% of middle-class families had previously used teeth. When considered in isolation, the survey's findings are questionable due to blatant bias in the question that was posed. Even though the specific numbers for each group may be slightly overstated, a more meaningful and substantial interpretation can be drawn if this 60% is compared to the similar figure of 90% for families in the higher income group.

G. Various Research Designs Using Primary Data:

a. Structured Study: A radio manufacturer would ask respondents a series of questions in a predetermined order to find out how many people own radios, what kind they are, and when they purchased them. Has a radio been won by your family? Yes/No (ask whether the answer is yes). Which brand is it? Name________________ What number of valves are there? No______________________ When was this radio date purchased by you?____________ This is an illustration of an organized, open-minded study.
b. Non-Structured Study: Marketing executives are primarily interested in learning why consumers choose to purchase their goods or not. explanations that can be categorized as
   - These justifications, are a component of each person's personal goals or views.
   - The ones that stem from external factors like advertisements.
   - The justifications that stem from the attributes of the product itself. However, each of these three categories was the focus of the query. This strategy is still insufficient. Many people won't disclose motivations that could be viewed as uncivilized or low. Psychoanalysts have devised strategies to help overcome these challenges.
c. Projective Technique (Disguised Study): The respondent is asked to depict a (ambiguous) circumstance. The respondent's attitudes and personality are projected into the situation described in the description. Although there are several projective strategies, word association, sentence completion, and narrative are the most frequently utilized. A list of words is read to the respondent one at a time during word association. The respondent states the first thought that enters his head after each word. Sentences in stories must be completed by the respondent to meet sentence completion requirements. When asked to narrate a narrative, the respondent is shown an image or given a description and asked to elaborate.
d. Unveiled Dept. Interview The interviewer tries to persuade the responder to speak honestly about the topic of interest rather than coming at them with a five-point list of questions. The interviewer does this to put the responder at ease and then encourages him to share whatever thoughts he may have. The interviewer may "prob" further, asking questions like, "That is interesting, why do you feel that way," if a topic of interest is dismissed too fast. This promotes more conversation about the topic. If more information from the respondent is required, a variety of probes might be employed.

This kind of interviewing does not involve a formal questionnaire, but the interviewer does have a framework in mind.

The interviewer will introduce questions about these subjects if the responder does not discuss any areas of special interest.

The goal of these interviews is to uncover the fundamental or underlying motivations behind the respondent's stated justifications for certain marketing decisions.

The interviewer should have at least 500 field interviews under their belt and a background in social psychology.

An interviewer acts as a moderator during discussions with groups of six to eight people.

6.4 Techniques for Collection of Data:

What is Data Collection?

To solve the research topic, data collecting in statistics refers to the process of compiling information from all pertinent sources. Assessing the problem's outcome is helpful. One can draw conclusions and provide a response to the pertinent question using the data collection methods.

The majority of firms make assumptions about future trends and probability using data collection techniques. The data organization procedure must be followed after the data has been gathered.

"Data" is the primary source used in the data collection procedures. Primary and secondary data are the two categories into which data can be divided.

- Primary Data Collection methods
- Secondary Data Collection methods

6.4.1 Primary Data Collection Methods:

Information that is gathered directly from the first-hand source through surveys, tests, or observations is referred to as primary data or raw data. There are two more categories for the main data collection technique. They're

A. Techniques for Collecting:

Quantitative Data
Qualitative Data Gathering Techniques

Let's talk about the many techniques used to gather data for these two approaches to data collecting.

B. Quantitative Data Collection Methods:

It is based on mathematical calculations performed in multiple formats, such as closed-ended questions, regression and correlation analyses, and measures of the mean, median, or mode. This method is less expensive and more quickly applied than qualitative data collection methods.

C. Qualitative Data Collection Methods:

There are no mathematical computations involved. This approach is strongly related to non-quantifiable elements. Case studies, observations, questionnaires, interviews, and other methods are used in this qualitative data collection process. This kind of information can be gathered in a number of ways.

They are

D. Observation Method:

When a study is related to behavioral science, the observation approach is utilized. This approach is methodically prepared. It is governed by numerous checks and balances. The various categories of observations include:

Both organized and unorganized observation
both regulated and unregulated observation
Disguised observation, participant, and non-participant

E. Interview Method:

The technique of gathering information through spoken answers.

Personal Interview: In this approach, the interviewer must ask the subject questions directly and in-person. The personal interview might be concentrated discussion, direct inquiry, structured or unstructured, etc.

Telephone Interview: Using this strategy, an interviewer calls people to asks questions or gets their opinions verbally in order to gather information.

F. Questionnaire Method:

The collection of questions is mailed to the respondent using this way. They have to read the questionnaire, respond, and then send it back.

The following elements are essential for a quality survey:

Brief and uncomplicated

should make sense in order.

Make enough room for the responses.

Steer clear of technical phrases

should be visually appealing, including color and paper quality, to draw the respondent's attention.

G. Schedules:

There is a little variation between this method and the questionnaire method. The enumerations are designated specifically to complete the schedules.

It clarifies the goals and objectives of the study and could clear up any ambiguities that might have arisen. Enumerators ought to receive training on how to work diligently and patiently in their profession.

There are two primary ways to find out more information about a situation, problem, or event. Sometimes all that is needed is to extract the information that is already there. However, there are situations where obtaining the information is required. The three primary methods of information gathering are used to classify the data into the following categories:

- Primary Data Collection
- Secondary Data Collection
- Information gathered using the first method is thought to have originated from secondary sources, even if the sources utilized in the second process are referred to as main sources.
- Secondary sources include information gathered from books, journals, magazines, periodicals, and articles to learn about historical and other types of information, as well as things like using hospital records to learn about the patterns of morbidity and mortality in a community, using census data to learn about the age-sex makeup of the population, and analyzing an organization's records to learn about its operations.

To sum up, primary sources provide first-hand information, whereas secondary sources provide second-hand knowledge. The many techniques for gathering data are shown below.

6.5 Techniques for Gathering Data:

None of the data collection methods yield information that is 100% reliable and accurate. We will discuss each technique and highlight a few more factors that impact the caliber of the data gathered. As a good researcher, you are able to control the variables that could affect the quality of your data.

How well researchers comprehend and apply data collection techniques is one of the key ways that novice and seasoned researchers differ from one another. Corresponding Sources Survey for Observation Interviews and Document Gathering Structured Mail-In Questionnaire for Participants Unstructured Group Survey for Observers - Publications from the government - Prior studies Control over customer histories, individual records, service data, census data, etc. A novice must therefore understand them.

6.5.1 Gathering Primary Data from Sources:

Gathering primary data can be done in several ways. The goal of the study, the resources at hand, and the researcher's experience all influence the approach they use.

Sometimes there are limitations, like a lack of resources or necessary abilities that prevent the employment of the best-suited approach to accomplish the study's objectives. In such circumstances, you ought to be conscious of the issues these restrictions pose to the data's quality.

The socioeconomic demographics of the study population are crucial in choosing a data collection strategy; you should be as informed as possible on factors like educational attainment, age distribution, socioeconomic status, and ethnic background. Knowing the research population's interest in and attitude toward study participation is beneficial, if at all possible. For a variety of reasons, some groups might not feel comfortable sharing their ideas in a questionnaire or with a specific technique of gathering data (such as being interviewed). Furthermore, compared to persons with higher levels of education, those with lower levels of education could react differently to specific data collection techniques.

How well prospective respondents are informed about the goal and applicability of the study is a significant factor in determining the quality of your data. Regardless of the technique employed for gathering data, ensure that participants comprehend the aim and significance of the research. This is crucial when using a questionnaire to gather data since, unlike in an interview, you won't have the chance to react to questions from respondents in a questionnaire.

Each data-gathering method is covered in the section that follows, along with its drawbacks and limits, as well as how applicable and appropriate it is in a given scenario.

A. Observation:

One method of gathering primary data is observation. Observation is the deliberate, methodical, and selective process of observing and recording an occurrence or interaction as it happens. There are numerous circumstances where observation is the best way to gather data. These include learning about group interactions, researching the dietary habits of a population, identifying the tasks carried out by employees, and examining an individual's behaviour or personality. It is also appropriate in circumstances where asking questions fails to elicit complete and/or correct information 150 because it makes it impossible for respondents to step back from the encounter and as a result, they are either uncooperative or ignorant of the response.

In conclusion, observation is the ideal method to gather the necessary data when you are more interested in the behaviour than in people's impressions of it, or when respondents are too engrossed in the encounter to offer objective information about it.

Types of observation: Two categories of observation exist:

- Observation of participants;
- Observation by those not involved.

When you, as a researcher, engage in the group's activities in the same way as its members—whether or not they are aware that they are being watched—you are engaging in participant observation. For instance, you may like to look into how the general public views those who use wheelchairs.

You can observe their responses by using a wheelchair yourself, or you might choose to learn about prisoner life by assuming the role of a prisoner.

Contrarily, non-participant observation refers to the situation in which you, as the researcher, monitor and listen to the group's activities without actively participating in them to make conclusions. For instance, you may wish to research the duties performed by hospital nurses. You might monitor, follow, and document the actions as they are carried out.

Conclusions about the role nurses play in the hospital might be made after several observations were made. It is possible to observe any occupational group in any setting in the same way.

Challenges in employing observation as a means of gathering data: There are a variety of issues that can arise when using observation as a data gathering method; however, not all of these issues will always be present. However, you should be aware of these issues as a novice.

When people or organizations realize they are being

- If they are noticed, their behaviour can alter. This change could be beneficial or detrimental, depending on the circumstances. For example, it could improve or decrease their productivity, and it could happen for a variety of causes. The Hawthorne Effect is the term used to describe the situation in which an individual's or group's behaviour changes and is ascribed to being monitored. When observation is used in this kind of situation, it could bring distortion because what is seen could not be representative of their typical behaviour. The potential for observer bias never goes away. If a bystander is
- Partial, readily introducing bias, and difficult to verify the observations and conclusions derived from them Observations can be interpreted differently by different observers. Depending on the manner of recording, there is a chance of insufficient observation and/or recording. A close observer may pay attention, but detailed documentation may suffer as a result. The converse issue could arise if the observer makes thorough notes but inadvertently misses part of the conversation. Conditions in which observations can be made: There are two situations in which observations can be made: Organic;
- Under natural conditions, observation refers to watching a group in action as opposed to conducting interviews while they are engaged in their activities. Controlled observation is presenting stimuli to the group so they can respond to it and then watching how they respond. The Documentation of Observations: Observation can be recorded in a variety of ways. The goal of the observation determines which recording technique is best. Remember that every approach has benefits and drawbacks. Storytelling: Using this type of recording, the researcher gives a personal account of the conversation. Typically, he or she takes brief notes during the interaction and then quickly writes thorough, narrative notes shortly after.

Furthermore, some researchers might analyze the exchange and make inferences from it. The primary benefit of narrative recording is that it offers a more in-depth understanding of the exchange. One drawback, though, is that an observer could be biased in what they see, which could lead to biased perceptions and conclusions.

Additionally, if a researcher is focused on watching, it's possible that they will overlook documenting a crucial exchange, and naturally, some of the exchange may be lost in the process of recording. Therefore, there's always a chance that observations and/or recordings aren't complete. Furthermore, the comparability of narrative recording may be problematic when there are multiple witnesses.

Scales: To rate different features of the interaction or phenomenon, some observers may occasionally want to create a scale. The observer/researcher develops the scale on which the recording is made. Depending on why the observation is being made, a scale can have one, two, or three directions. For instance, there are three directions—positive, negative, and neutral—on the scale in Figure 9.2 that is intended to document the type of interaction inside a group. The lack of detailed information about the interaction is one of the issues with using a scale to record observations. It might also experience any of the following issues:

The observer may tend to stay away from the extremes of the scale and instead use the centre portion unless they are very confident in their abilities to evaluate an interaction. The term "error of central tendency" refers to the error that this tendency produces. - Similar to how some teachers are strict markers and others are not, some observers might favour particular areas of the scale. The elevation effect is a phenomenon that occurs when observers tend to record interactions using a specific area of the scale.

An additional form of inaccuracy that could arise is when an observer's assessment of one part of the interaction affects their assessment of another aspect of the interaction. Similar situations can arise in education as well, for as when a teacher's evaluation of a student's performance in one topic affects the student's rating.

Categorical recording: An observer may choose to use categories to document their observations on occasion. The kind of interaction and the observer's decision regarding the classification of the observation determine the kind and quantity of categories.

For instance, there are two categories for passive/active people, two categories for introverts and extroverts, and five categories for strongly agree, agree, disagree, and are unclear. The same issues that plague scales may also affect the use of categories to document observations. - Recording on mechanical devices: An observation can also be captured and subsequently analyzed on a video cassette. One benefit of recording the encounter is that the observer can watch it multiple times before making any judgments.

Additionally, by inviting other experts to watch the film, more objective conclusions can be reached. One drawback, though, is that some people might feel uneasy or act differently in front of a camera. As a result, the exchange might not accurately represent the circumstances. The goal of the observation, the intricacy of the interaction, and the population type being observed all influence the method you use to document your findings. It is crucial to take these things into account when choosing how to document your observation. B The conversation: One popular technique for getting information from people is conducting interviews.

We gather information from others through a variety of interactions in various spheres of life. An interview is any face-to-face conversation between two or more people that has a predetermined goal in mind.

Conversely, interviews can be extremely flexible when the interviewer is free to ask any questions that come to mind regarding the topic under investigation, or they can be rigid when the investigator is forced to stick rigidly to the predetermined questions.

Interviews are categorized as follows based on how flexible they are. 154 Interview Type: interviews with varying degrees of specificity and flexibility Interview framework that is both flexible and rigid; interview contents that are both flexible and rigid; and flexibility in the interview questions - The phrasing of rigidity interview questions

- **a. Unstructured Interviews:** Unstructured interviews have the advantage of offering nearly total flexibility about both topic and format. You can put these in any order you choose. Additionally, you are at total liberty when it comes to the phrasing you employ and the explanation of questions to your respondents. Depending on what comes to mind in the context of the conversation, you are free to ask questions and bring up issues as they arise. Oral histories, focus groups, in-depth interviews, and narrative interviews are a few examples of unstructured interviewing techniques.
- **b. In-depth Interviews:** The interpretative tradition serves as the theoretical foundation for in-depth interviewing.
- **c. Focus Group Interviews:** A focus group interview is conducted with a group, whereas an in-depth interview is conducted with an individual. That is the only distinction between the two types of interviews. You can learn more about a group of people's perceptions, experiences, and understandings of a situation or event by conducting focus group interviews with them. You may, for instance, investigate topics like physical disabilities, domestic abuse, and refugees with pertinent organizations. Conducting Informal Interviews That Are Structured
- **d. Narratives:** Compared to focus groups, the narrative method of information collection has even less organization. Except for the researcher's attempt to approximate a person's experience of an incident that occurred in her or his life, narratives rarely contain planned content. In essence, you, the researcher, just listen as the subject describes an event or circumstance. Occasionally, you can also use active listening strategies to support the person by saying things like "uh huh," "mmmm," "yeah," "right," and nodding when necessary. In essence, you listen to them freely and don't interrupt.
- **e. Oral Histories:** Just as with narratives, oral histories need the use of both active and passive listening techniques. However, oral histories are more frequently utilized to learn about historical events or episodes that happened in the past or to learn about a cultural practice, habit, or tale that has been passed down through the generations. While oral histories focus on historical, social, or cultural events, narratives tend to focus more on an individual's personal experiences.
- **f. Structured Interviews:** In a structured interview, the researcher follows the format and sequence of questions listed in the interview schedule, asking a planned set of questions. A written list of open-ended or closed-ended questions created for an interviewer to use in a face-to-face, telephone, or other electronic medium contact is called an interview schedule. Keep in mind that while interviews are a way of gathering data, interview schedules are a research tool or instrument.

6.5.2 Techniques for Gathering Secondary Data:

Secondary data is information gathered by a party other than the original user. It indicates that the data has already been analyzed and is available. Books, journals, periodicals, magazines, and newspapers are examples of secondary data. Either published or unpublished data may be involved.

Published data can be found in a number of places, such as

- Public records; historical and statistical materials; publications by the government
- Commercial papers
- Trade and technical journals
- Unpublished information comprises
- Letters; diaries; unpublished biographies, etc.

6.6 Data Collection Considerations and Best Practices:

Before investing time and resources in traveling to the field to collect data, we must properly plan. Effective data gathering techniques can help us gather deeper, more accurate, and richer data while saving time and resources.

Some of the Best Practices That We Can Adhere to in Order to Achieve the Best Outcomes are Covered Below:

A. Take into Account the Price of Each Extra Data Point

After deciding what information, we want to collect, we must be sure to account for the associated costs. For every extra data point or survey question, our surveyors and respondents will have to pay more.

B. Determine How to Compile All of the Data.

The amount of publicly available data is limited. There are situations when the data is present but not always accessible. For example, we cannot openly view the medical records of another individual unless we have a good reason to do so. It could be difficult to measure several kinds of data.

When choosing the data to collect, take into account how time-consuming and challenging it will be to obtain each piece of information.

C. Think about Your Choices for Data Collecting Using Mobile Devices

Three categories apply to mobile-based data collection.

- Interactive voice response system (IVRS): This technology will phone responders and pose pre-recorded questions to them.

- SMS data collection: The respondent will receive a text message on their phone, allowing them to reply to questions via text.
- Field surveyors: With the use of smart phone apps, they can directly enter data into an interactive questionnaire while conversing with each respondent.

Because every tool has pros and cons of its own, we must be careful to choose the right one for our survey and respondents.

D. Carefully Consider the Data You Need to Gather

Information about anything and everything may be found far too easily, yet it's important to collect only the data we need.

It is beneficial to think about these three inquiries:

- What specifics are useful?
- What information is available?
- What particular information is needed?

E. Remember to Consider Identifiers

Identifiers, or the specifics that explain the background and origin of a survey response, are just as important as the details regarding the program or topic we are genuinely examining. More identifiers will generally help us identify the achievements and failures of our program more precisely, but balance is essential.

F. Data Collecting Through Mobile Devices is the Way to Go

Even though paper data collection is still widely used in modern technology, mobile devices play a major role. They are accurate, fast, and allow us to collect a wide range of data at comparatively reduced costs. With the abundance of affordable Android devices on the market these days, there aren't many reasons not to choose mobile-based data collection.

6.7 Summary:

The data collection chapter outlines the methodology and procedures used to gather relevant information for the research study. It typically begins with an overview of the research design, including whether it is qualitative, quantitative, or mixed methods. The chapter then delves into the specifics of data collection instruments, such as surveys, interviews, observations, or experiments.

Key Components of the Data Collection Chapter Include:

- Research Design: Describes the overall approach to the study, including its purpose, scope, and objectives. This section may also include a rationale for selecting a particular research design and any relevant theoretical frameworks.

- Sampling Methods: Explains how participants were selected for the study, including the criteria used for inclusion and exclusion. This section may discuss the sampling strategy (e.g., random sampling, purposive sampling) and justify its appropriateness for the research.
- Data Collection Instruments: Details the tools used to collect data, such as surveys, questionnaires, interviews, or observation protocols. It includes information about the development or adaptation of these instruments, their validity and reliability, and any pilot testing conducted.
- Data Collection Procedures: Provides a step-by-step description of how data were collected, including recruitment procedures, administration of instruments, and any measures taken to ensure data quality and ethical considerations.
- Data Analysis Plan: Briefly outlines the approach to data analysis, including the techniques or software used to analyze the data and any specific procedures for handling missing data or outliers.
- Ethical Considerations: Discusses ethical issues related to data collection, such as informed consent, confidentiality, and participant anonymity. It also describes any measures taken to minimize potential risks to participants.
- Limitations: Acknowledges any limitations or constraints encountered during the data collection process, such as sample size limitations, response bias, or practical challenges.

Questions:

1. What are the methods used for gathering data?
2. Write down primary data collection methods.