

# TRINITY COLLEGE FOR WOMEN NAMAKKAL DEPARTMENT OF NUTRITION AND DIETETICS

# BASIC RESEARCH METHODOLOGY ODD SEMESTER

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### RESEARCH

Research methodology is a way of explaining how a researcher intends to carry out their research. It's a logical, systematic plan to resolve a research problem. A methodology details a researcher's approach to the research to ensure reliable, valid results that address their aims and objectives. It encompasses what data they're going to collect and where from, as well as how it's being collected and analyzed.

#### TYPES OF RESEARCH

When designing a research methodology, a researcher has several decisions to make.

One of the most important is which data methodology to use, qualitative, quantitative or a combination of the two.

No matter the type of research, the data gathered will be as numbers or descriptions, and researchers can choose to focus on collecting words, numbers or both.

#### **Qualitative**

Qualitative research involves collecting and analyzing written or spoken words and textual data. It may also focus on body language or visual elements and help to create a detailed description of a researcher's observations. Researchers usually gather qualitative data through interviews, observation and focus groups using a few carefully chosen participants.

This research methodology is subjective and more time-consuming than using quantitative data. Researchers often use a qualitative methodology when the aims and objectives of the research are exploratory. For example, when they perform research to understand human perceptions regarding an event, person or product.

#### Quantitative

Researchers usually use a quantitative methodology when the objective of the research is to confirm something. It focuses on collecting, testing and measuring numerical data, usually from a large sample of participants. They then analyze the data using statistical analysis and comparisons. Popular methods used to gather quantitative data are:

Surveys

Questionnaires

Test

Databases

Organizational records

#### **Mixed-method**

This contemporary research methodology combines quantitative and qualitative approaches to provide additional perspectives, create a richer picture and present multiple findings. The quantitative methodology provides definitive facts and figures, while the qualitative provides a human aspect. This methodology can produce interesting results as it presents exact data while also being exploratory.

#### TYPES OF SAMPLING DESIGN IN RESEARCH METHODOLOGY

#### **Probability sampling**

This sampling method uses a random sample from the pool of people or items you're interested in, called the population, and is random or chance sampling. Every person or item in the population has an equal chance of being selected. Using this method is the best way to get a truly representative sample, and researchers can generalize the study's results to the entire population.

#### Non probability sampling

Non probability sampling is not random, as the researcher deliberately selects people or items for the sample. Researchers also refer to this method as deliberate sampling, judgment sampling or purposive sampling. Every person or item in the population doesn't have an equal chance of being selected, and the results are typically not generalizable to the entire population.

## THANK YOU

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