Data Cleaning and Descriptive Analysis

Experiment 6 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To complete the data cleaning and descriptive analysis stage of a supervised pharmacy-practice project.

Principle

Analysis begins with a traceable cleaned dataset. Descriptive summaries must match the data type and denominator.

Requirements

- Supervisor-approved project topic, institutional requirements and authorised project documents.
- Project record and analysis tools appropriate to the approved design.

Procedure

1. Preserve raw data

Keep a protected raw dataset and work on a labelled analysis copy.

2. Check completeness

Review duplicates, impossible values, inconsistent codes and missingness; document each correction.

3. Summarise

Use counts/percentages for categories and suitable centre/spread for quantitative data.

4. Show denominators

State how many records contributed to each result and why any were excluded.

5. Review

Compare outputs with the source records and the pre-specified analysis plan.

Observations and Record

Project record item	Entry
Dataset / version	_____
Cleaning decisions	_____
Included / missing counts	_____
Summary measure / denominator	_____
Review status	_____

Worked Example

The numbers below are illustrative; enter your own observations in the record.

- Percentage = number with the characteristic / relevant denominator × 100.
- Illustration: 18 of 60 fictional records gives 30%; if only 50 have an observed outcome, use and state the appropriate observed-outcome denominator.

Result

Project stage: ____. Completed record: ____. Supervisor feedback: ____. Next action: ____.

Precautions

- This is a project-work guide and blank record, not a completed research study or an approval certificate.
- Use only authorised data and keep participant identifiers separate from the analysis dataset.
- Report actual findings, protocol departures and limitations; never fill missing data with invented observations.

Viva Questions and Answers

1. Why specify the question before collecting data?

The question determines design, measures and the intended analysis.

2. What makes the project reviewable?

An approved plan, traceable data, an appropriate analysis and an honest account of limitations.

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