
Unit 9: Validity and Generalisability in Research

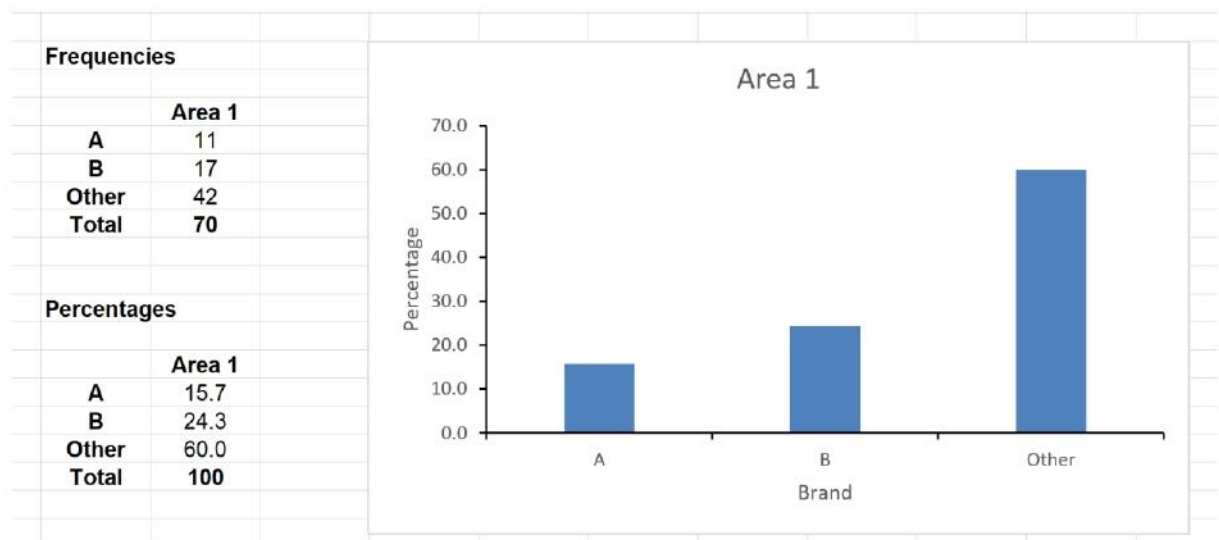
e-Portfolio Activity: Charts Worksheet

Task 1: Percentage Frequency Bar Chart (Area 1)

File: Exa 9.1D.xlsx

Objective

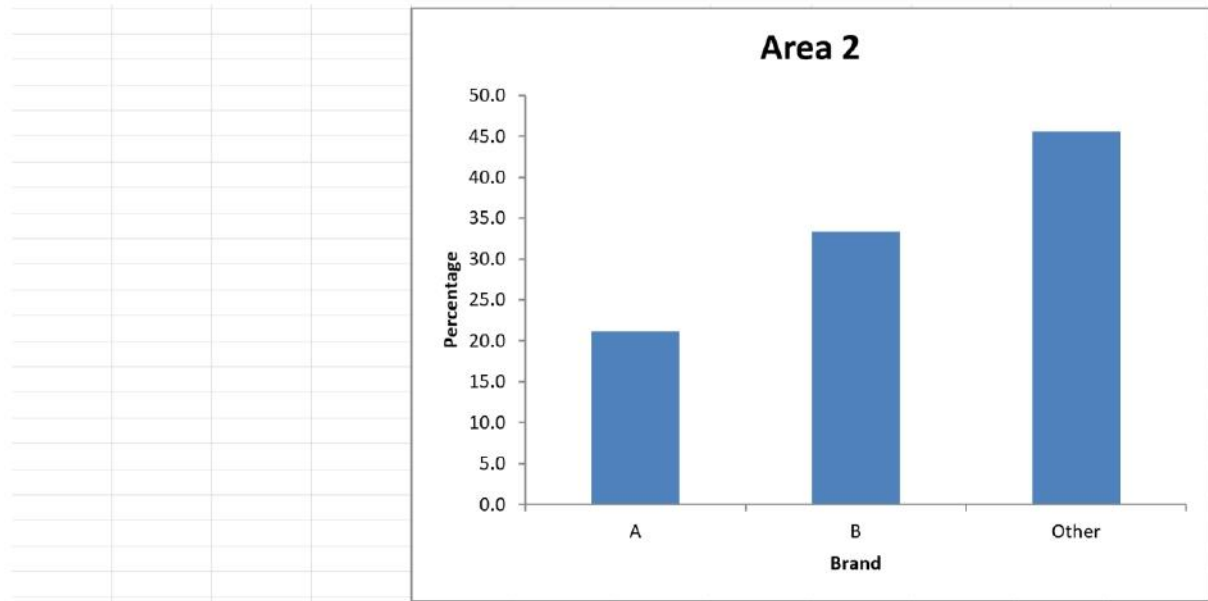
Create a bar chart showing brand preferences in Area 1.



Task 2: Percentage Frequency Bar Chart (Area 2)

File: Exa 9.1D.xlsx

Objective: Create a second bar chart for Area 2.

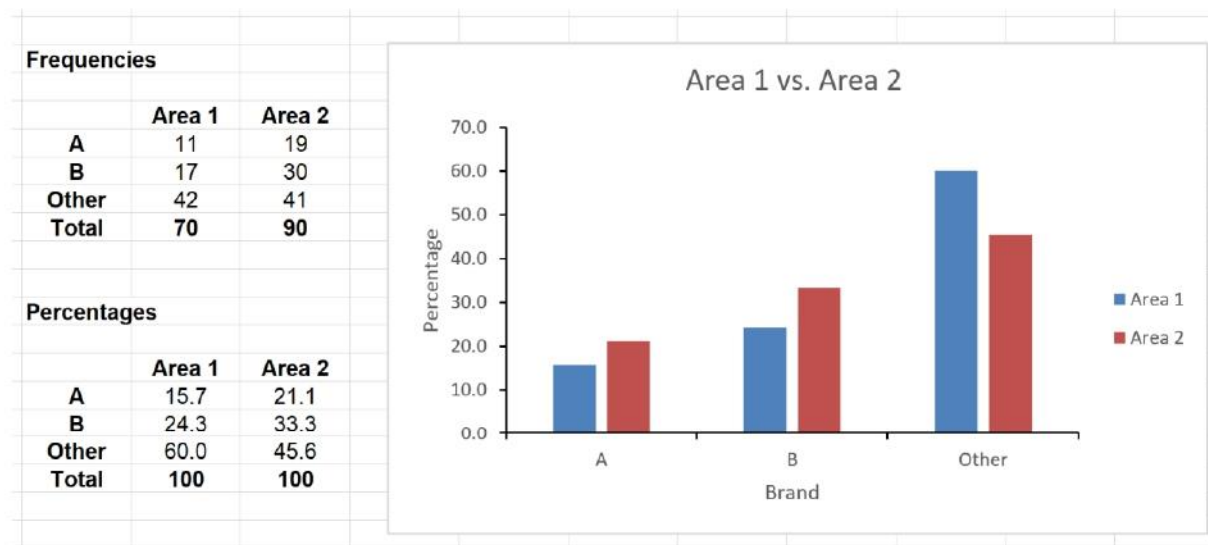


Task 3: Clustered Column Chart (Both Areas)

File: Exa 9.2D.xlsx

Objective

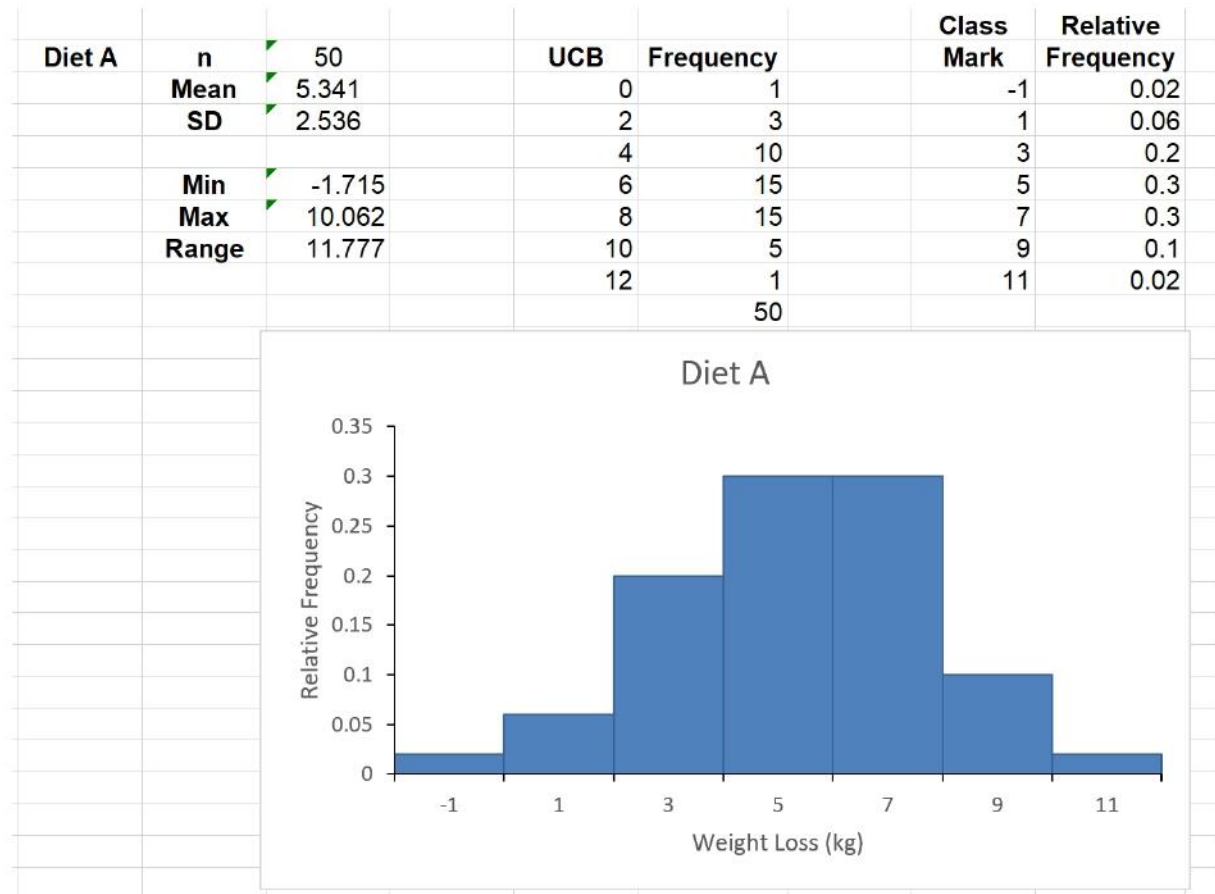
Compare brand preferences in both areas side-by-side.



Task 4: Histogram for Diet A (Weight Loss Data)

File: Exa 9.3B.xlsx

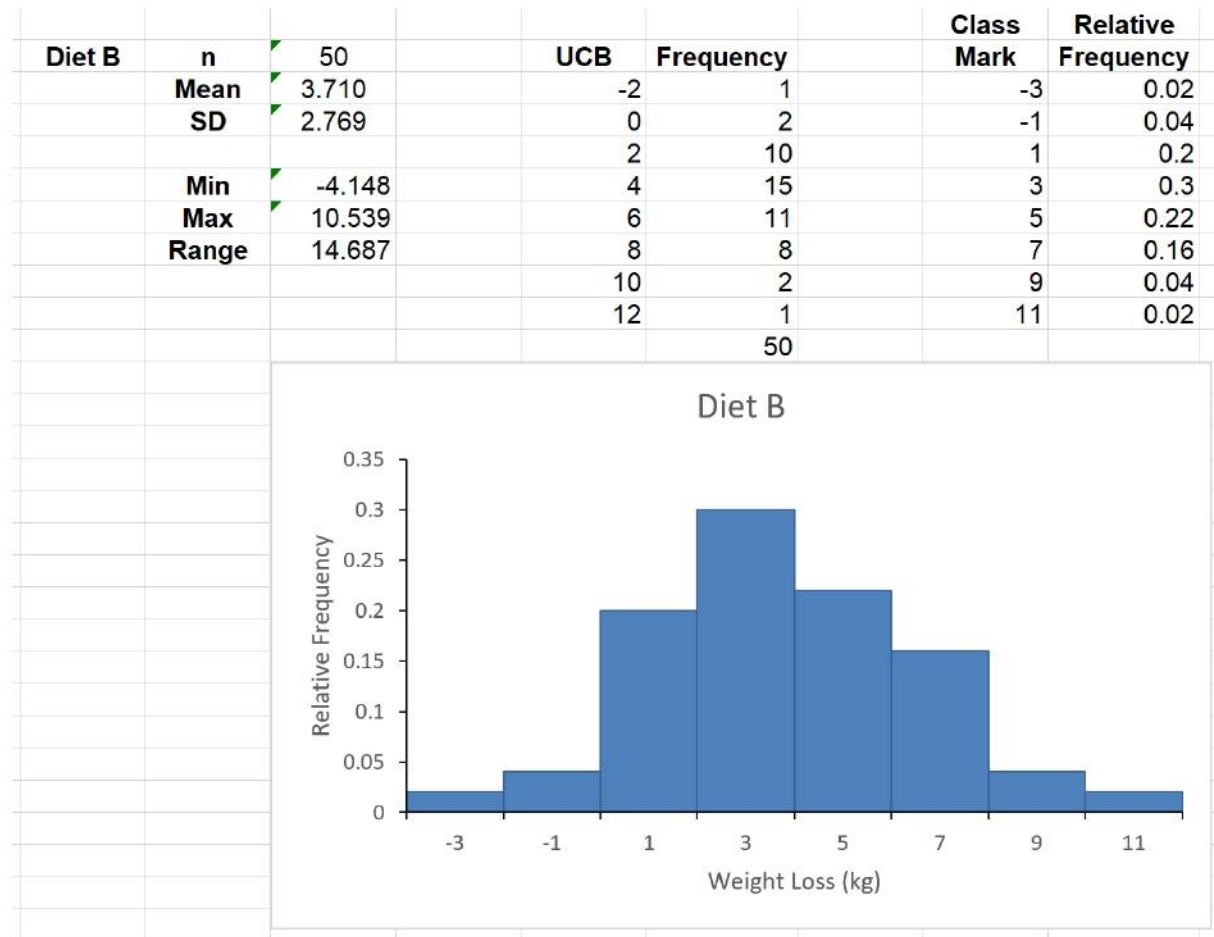
Objective: Create a histogram for Diet A weight loss distribution.



Task 5: Histogram for Diet B (Exercise)

File: Exa 9.3B.xlsx

Objective: Create a histogram for Diet B weight loss distribution.



Diet A (Histogram)

- Shape: Unimodal and roughly symmetrical, with a slight left skew (longer tail on the left).
- Peak: Most weight loss values cluster around 3–7 kg (central class marks).
- Extremes: Few outliers at the tails (e.g., one value near -1.715 kg [gain] and one near 10.062 kg [large loss]).
- Conclusion: Predictable results, with most participants losing a moderate amount of weight.

Diet B (Histogram)

- Shape: Likely right-skewed (longer tail on the right), with more variability than Diet A.
- Peak: Most values fall between 1–5 kg, but with a wider spread.
- Extremes:
 - More extreme weight gains (e.g., -4.148 kg) compared to Diet A.

- Some participants achieved very high losses (e.g., 10.539 kg).
- Conclusion: Less consistent results—some participants responded exceptionally well, while others gained weight.

Comparison of the Two Diets

- Diet A is more consistent, with most participants losing a moderate amount of weight (3–7 kg).
- Diet B shows greater variability:
 - Higher risk of weight gain (left tail).
 - Higher potential for extreme weight loss (right tail).
- Possible Implications:
 - Diet A may be safer for general use.
 - Diet B might work exceptionally well for some but could be risky for others.
- Key Takeaway
 - Diet A: Reliable, moderate outcomes.
 - Diet B: High-reward but high-risk, with unpredictable results.