Analysis and Interpretation

Exercise 9.1: Bar Charts for Brand Preferences in Area 1 and Area 2

(Area 1 vs. Area 2 – Frequencies and Percentages)

Area 1

- A strong majority of respondents (60%) chose "Other" brands (42 responses)

- Brand B ranked second, with 24.3% (17 responses).

- Brand A was the least popular, coming in at 15.7% (11 responses).

Area 2

- "Other" also drew the highest preference (45.6%), this figure was slightly lower than in Area 1 (41 responses).

- Brand B climbed to 33.3% (30 responses).

- Brand A also gained ground, reaching 21.1% (19 responses).

Interpretation:

- Both Brand A and Brand B saw a rise in popularity in Area 2 compared to Area 1.

- The decrease in the "Other" category in Area 2 (from 60% down to 45.6%) indicates that consumer behavior or brand availability differs between these two regions.

- Area 1 appears to favor non-mainstream brands to a greater extent, suggesting a diverse or possibly niche brand loyalty among its consumers.

- Area 2 displays more balanced preferences, with Brands A and B capturing larger shares. This shift could be linked to factors such as more aggressive marketing, improved product availability, or a demographic more inclined to choose mainstream labels.

Exercise 9.2: Clustered Column Chart Comparing Areas 1 and 2

(Percentage Comparison)

Brand A

- Area 1: 15.7%

- Area 2: 21.1%

- +5.4% increase in Area 2

Brand B

- Area 1: 24.3%

- Area 2: 33.3%

- +9% increase in Area 2

Other Brands

- Area 1: 60%

- Area 2: 45.6%

- -14.4% decrease in Area 2

Interpretation

The clustered column chart visually underscores the dominance of "Other" brands in both areas, but also highlights a clear decline in their popularity from Area 1 to Area 2. Simultaneously, both Brand A and Brand B captured a larger share of preferences in Area 2. This discrepancy points to differing regional interests, possibly influenced by market strategies, consumer familiarity with specific brands, or variations in local product offerings.

Exercise 9.3: Histograms for Weight Loss in Diet A and Diet B

(Relative Frequencies)

Diet A

- Around 60% of participants achieved a weight loss between 3–7 kg.

- The distribution appears fairly symmetrical, with only a small number of individuals at the extremes (under 1 kg or over 9 kg of weight loss).

Diet B

- The weight loss results are more dispersed than in Diet A.

- While most participants (52%) fell into the 3–5 kg range, there were more individuals who reported either minimal weight loss/gain or more substantial losses beyond 7 kg.

Interpretation:

- Diet A shows a narrower, more consistent spread of outcomes, indicating that participants tended to cluster around a moderate weight loss range.

- Diet B exhibits higher variability, suggesting that some people may lose significantly more weight (or possibly gain) while others see minimal results.

- Diet A appears more reliable for those seeking a moderate yet steady outcome. The majority of individuals stay within a midrange level of weight loss, implying a greater level of predictability.

- Diet B may appeal to those who are comfortable with a "higher risk, higher reward" strategy. Although some participants achieve notable weight loss, others may end up experiencing minimal or even negative results.