Descriptive Statistics II

UNIT 2: Different types of correlation:
1. Define correlation ratio and explain its significance in analyzing relationships between variables.
2. Apply intra-class correlation to assess the reliability and consistency of measurements within group data.
3. Compare and contrast Spearman's and Kendall's rank correlation methods in determining the strength and direction of monotonic relationships.

UNIT 3: Association in two-way tables:
4. Analyze a 2x2 contingency table to recognize patterns of independence and association between variables.
5. Interpret Yules and Cramer's measures of association to quantify the degree of relationship between categorical variables.
6. Calculate odds ratio to understand the likelihood of an event occurring based on the presence of a specific factor.
7. Utilize Pearson's chi-square, Kendall's τ & τb, and Goodman Kruskal's gamma to assess associations in kx1 contingency tables.

UNIT 4: Multivariate Data:
8. Apply least squares and multiple linear regression to model relationships between multiple predictors and a response variable.
9. Evaluate the strength and direction of relationships using multiple and partial correlation in multivariate data analysis.
10. Incorporate qualitative predictors in multiple linear regression models to explore the impact of categorical variables on outcomes.