StatAnalyzer Pro

Advanced Statistical Analysis Platform

Statistical Analysis Report

File: Descriptive statistics including stem.docx

Generated: 7/20/2025

Powered by IBM SPSS and R Studio with Automation Workflow

Executive Summary

Statistical analysis completed successfully. Comprehensive results are available in the detailed sections below.

Data Overview

Total Observations: 49

Total Variables: 1

Numerical Variables: 1

Categorical Variables: 0

Missing Values: 0.00%

Variable Types

Variable Name	Type	Count	Missing
Text	numerical	40	0

Descriptive Statistics

Text (numerical)

Mean: 145.225	Median: 145.500	Std Dev: 14.257
Min: 102.000	Max: 173.000	Count: 40

Statistical Tests

Test Statistic: 0.9905 p-value: 0.8000 Significant: No
Interpretation: undefined

One-Sample T-Test

Test Statistic: 64.4214 p-value: 0.0000 Significant: Yes
Interpretation: Sample mean is significantly different from population mean

Advanced Statistical Tests

Normality Tests

Text:

Shapiro-Wilk Statistic: 0.9905
p-value: 0.8000
Jarque-Bera Statistic: 2.1579
Distribution: Normal

Quality Control Charts

X-BAR Control Chart 1

Center Line (CL): 145.225
Upper Control Limit (UCL): 187.997
Lower Control Limit (LCL): 102.453
Out of Control Points: 1

Process Status: OUT OF CONTROL
Action Required: Investigate special causes

AI-Powered Interpretation

Key Findings

1. Data processing completed with full variable detection
2. Descriptive statistics calculated for all numeric variables
3. Statistical tests performed where applicable
4. Professional report generated with detailed methodology

Statistical Significance

Statistical significance testing completed at ; Ò ã R ÆPvel. Review individual test results for detailed p-values and interpretations.

Practical Implications

Results provide quantitative insights for data-driven decision making. Consider the practical significance alongside statistical significance when interpreting findings.

Recommendations

1. Review descriptive statistics for data quality assessment
2. Examine correlation patterns for relationship insights
3. Consider additional domain-specific analysis if needed
4. Validate findings with appropriate subject matter expertise

Methodology

Analysis performed using professional statistical methods equivalent to SPSS and R. Comprehensive data processing, variable detection, and statistical testing applied systematically.

Standard Statistical Procedures:

- Data validation and cleaning performed automatically
- Variable type detection using advanced algorithms
- Outlier detection using IQR method
- Statistical significance tested at ; Ò ã R ÆPvel
- Correlation analysis using Pearson correlation coefficient
- Normality testing using Shapiro-Wilk test

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