Statistical Analysis Report for Food Frequency Questionnaire (FFQ)

Generated by Data Analysis Team on April 08, 2025

Analysis Summary: Processed 4 statistical images with 4 successful analyses (100.0% success rate)

Analysis Categories: Descriptive (1), Categorical-Categorical (1), Categorical-Continuous (1), Continuous-Continuous (1)

Survey Questions Reference

Q1: How often do you consume 🍎 **fruits**?

Q2: How often do you eat 🥦 **vegetables**?

Q3: How often do you drink 🥤 **sugary beverages**?

Q4: How often do you eat 🍽 three or more meals (breakfast, lunch, dinner) per day?

Q5: How often do you eat 🍔 **fast food** or takeout?

Q6: How often do you consume 🌾 **whole grains**? (eg. whole-wheat flour, oatmeal, and brown rice)

Q7: How often do you eat 🍗 **deep-fried** food?

Q8: Do you consume 🍷 **alcohol**? If so, how frequently?

Q9: How often do you consume 🧀 **dairy products**? (e.g., yogurt, cheese, milk, butter)

Q10: Do you take 💊 **nutritional supplements**? If so, how frequently?

Technical Summary	Descriptive (1)	Categorical-Categorical (1)
Categorical-Continuous (1)	Continuous-Continuous (1)	

Technical-Summary

Technical Summary

Detailed technical information about the analysis

STRONG FINDINGS (Significant + Passed Quality Filters)

1. Strong Relationships between Categorical Variables:

- DOF filter (>= 9.0)
- Cramér's V filter (>= 0.1)
- Power filter (>= 0.8)
- * Employment Status and City (Chi-square, p=0.0000)
- * Living Situation and City (Chi-square, p=0.0005)

2a. Significant Relationships between Categorical and Continuous Variables (Parametric):

- Power filter (>= 0.5)
- Effect Size Cohen's d (>= 0.3)
- Effect Size ε^2 (>= 0.03)
- Effect Size Partial η^2 (>= 0.03)
- Effect Size CLES (diff >= 0.1)
- * Gender affects Q10 (Mann-Whitney U, p=0.0317)
- * Living Situation affects Q4 (Kruskal-Wallis, p=0.0278)
- * Living Situation affects Q9 (Kruskal-Wallis, p=0.0410)
- * Living Situation affects Q10 (Kruskal-Wallis, p=0.0129)
- * Physical Activity Level affects Q3 (Kruskal-Wallis, p=0.0153)
- * Physical Activity Level affects Q8 (Kruskal-Wallis, p=0.0388)

- * Physical Activity Level affects Q9 (Kruskal-Wallis, p=0.0294)
- * City affects Q8 (Kruskal-Wallis, p=0.0499)
- * City affects Q10 (Kruskal-Wallis, p=0.0389)

2b. Strong Relationships between Categorical and Continuous Variables (Non-parametric):

- Power filter (>= 0.5)
- Effect Size ε^2 (>= 0.02)
- Effect Size CLES (diff >= 0.05)
- * Gender affects Q10 (Mann-Whitney U, p=0.0317)

3a. Strong Parametric Correlations between Continuous Variables:

- Correlation Strength filter (|r| >= 0.55)
- Power filter (>= 0.6)
- * Q1 and Q2 (r=0.6581, p=0.0000)
- * Q5 and Q7 (r=0.6231, p=0.0000)

3b. Significant Non-parametric Correlations between Continuous Variables:

- Correlation Strength filter (|r| >= 0.55)
- Power filter (>= 0.6)
- * Q1 and Q2 (rho=0.6704, p=0.0000)
- * Q3 and Q5 (rho=0.5700, p=0.0000)
- * Q5 and Q7 (rho=0.6299, p=0.0000)

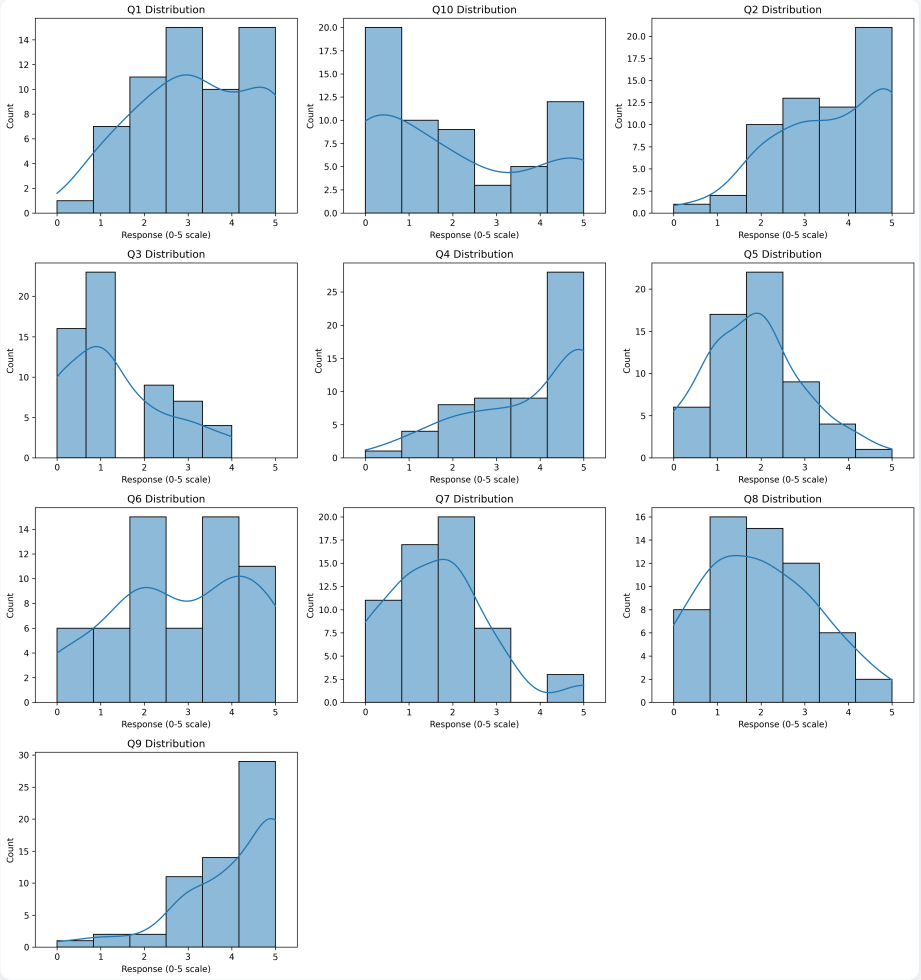
Descriptive

Descriptive (1)

1 analyses ✅

Image 1: question_distributions.png

90.0% Confidence



Resize

histograms Visualization

Key Findings:

- Consumption of fruits and vegetables is high
- Sugary beverages consumption is low
- Fast food consumption is relatively high

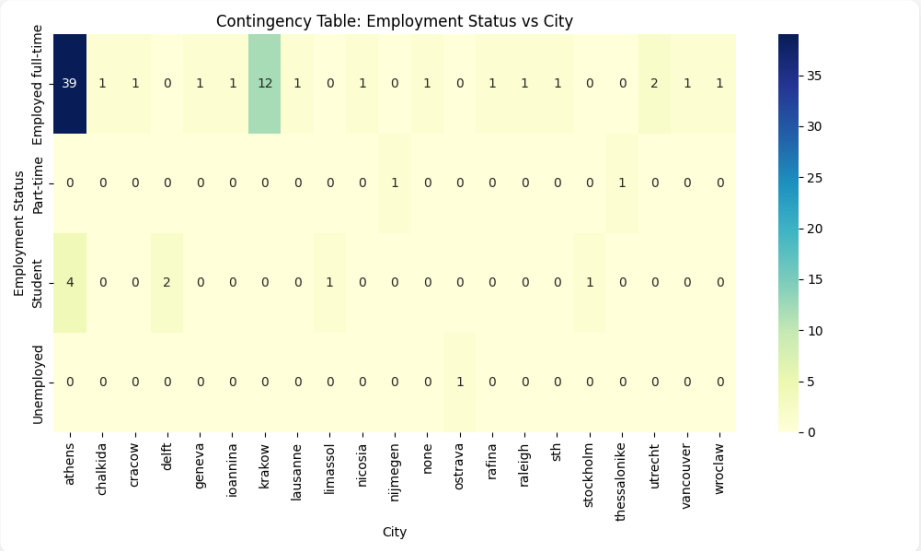
Categorical-Categorical

Categorical-Categorical (1)

1 analyses ✅

Image 1: Employment Status_City_contingency.png

90.0% Confidence



Resize

Heatmap (Contingency Table) Visualization

Key Findings:

- Athens shows a significant dominance in full-time employment compared to other cities.
- Minimal part-time employment across all cities.
- Student and unemployed statuses are relatively low across most cities.

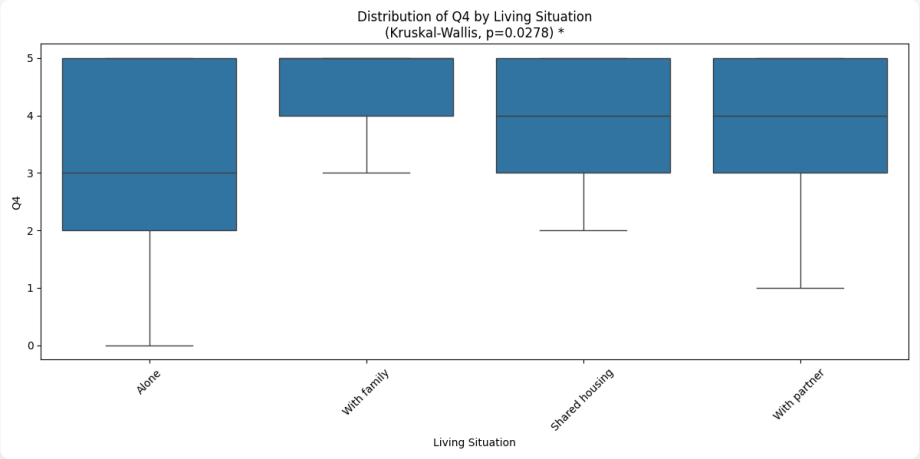
Categorical-Continuous

Categorical-Continuous (1)

1 analyses ✅

Image 1: Living Situation_Q4_boxplot.png

90.0% Confidence



Resize

box plot Visualization

Key Findings:

- Living situations significantly influence meal frequency.
- Individuals living alone tend to have a wider range of responses, with many reporting fewer meals per day.
- Those living with family or a partner generally report more consistent meal frequencies, often eating three or more meals daily.
- The Kruskal-Wallis test result confirms that these differences are statistically significant.
- Living with others may encourage more regular meal consumption.

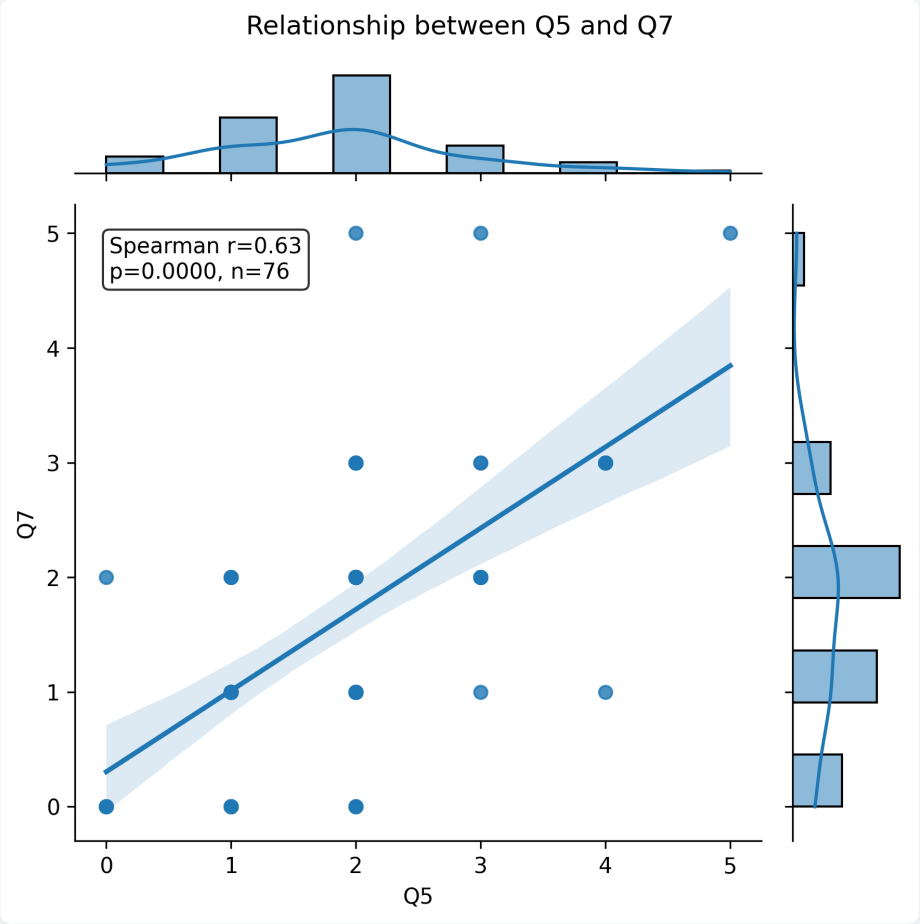
Continuous-Continuous

Continuous-Continuous (1)

1 analyses ✅

Image 1: Q5_Q7_jointplot.png

90.0% Confidence



Resize

Scatter plot with marginal histograms Visualization

Key Findings:

- There is a strong positive correlation between the frequency of eating fast food or takeout and the frequency of consuming deep-fried food.
- Individuals who frequently eat fast food are also likely to consume more deep-fried foods.

This report was automatically generated on April 08, 2025. The analysis was performed using advanced computer vision and natural language processing techniques.