Unit 6.1 Discussion

[Name]

[Institution]

Author Note

Unit 6.1 Discussion

# Measures of Central Tendency and Variability

The measures of central tendency are the categories or scores that describe what is defined as the “average” or “typical” for a given distribution. This includes mode, median and mean. The mode is used to represent the category in a data set that appears frequently and hence is usually employed by the sales department at a company to figure out their most sold item (Manikandan, 2011a). Median and mean are mostly used to determine the average, hence they are used to determine the average earning potential of any brand in a day, week or month. It is often overlooked for the median if there are any outliers present in the data set which may move the central tendency (Manikandan, 2011b).

On the other hand, the measures of variability are used to determine the rate of unevenness in the given data. It is further defined as the range and the interquartile range, the variance, along with standard deviation. They are usually employed to break down the obtained data and figure the variation among the sample over a specific range or parameter being tested.

# Statistical Tests

## Correlation

Correlation is one of the most reliable methods to find the degree of relationship that exists between two variables. This can be between dependent and independent variables or various parameters being observed for an experiment (Gogtay & Thatte, 2017).

In APA style formatting, it is written as “The two sets of data are strongly correlated r(66) = .49, p < .001.”

## Independent T-test

It is an inferential test that is used to determine if there is any statistical significance between the means of two unrelated groups of data (Kim, 2015).

In APA style formatting, it is written as “A showed more preference for B (*M* = 7.45, *SD* = 2.51) than C (*M* = 4.22, *SD* = 2.23), *t*(15) = 4.00, *p* < .001.”

## One Way ANOVA

ANOVA or analysis of variance is a method that is a technique that is frequently employed to analyze how the mean value of a variable is affected by a combination of different factors. It is essentially an extension of t-test and is usually used to compare various groups of data or treatments (Bewick, Cheek, & Ball, 2004).

In APA style formatting, it is written as “*F*(1, 149) = 2.12, *p* = .02.”

# References

Bewick, V., Cheek, L., & Ball, J. (2004). Statistics review 9: One-way analysis of variance. *Critical Care*, *8*(2), 130.

Gogtay, N. J., & Thatte, U. M. (2017). Principles of correlation analysis. *Journal of the Association of Physicians of India*, *65*(3), 78–81.

Kim, T. K. (2015). T test as a parametric statistic. *Korean Journal of Anesthesiology*, *68*(6), 540.

Manikandan, S. (2011a). Measures of central tendency: Median and mode. *Journal of Pharmacology and Pharmacotherapeutics*, *2*(3), 214.

Manikandan, S. (2011b). Measures of central tendency: The mean. *J Pharmacol Pharmacother*, *2*(2), 140–142.