Predictor Variables-Graft&Chart

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RES500 – Fundamentals of Quantities Analysis

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Chapter 1.18;
In case variables have two-part factors, one independent is x-variables or input variables unaffected or changed by any other variables.

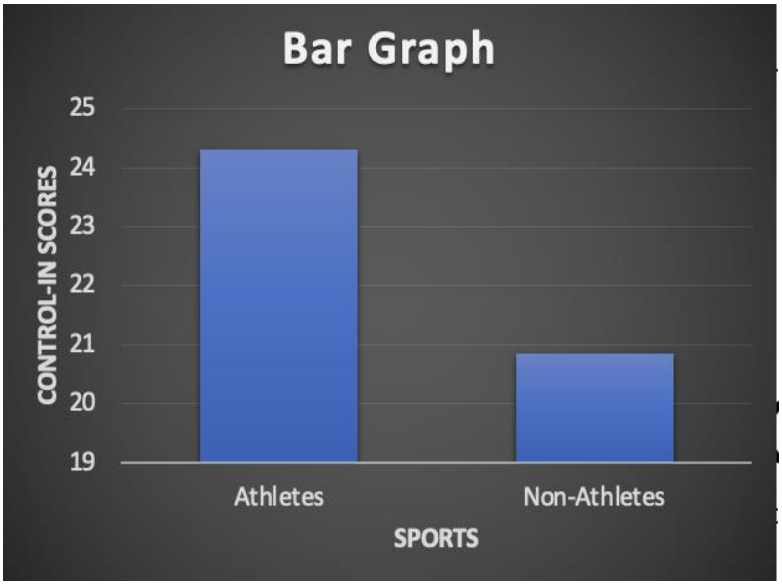
An example of the DOG task's case using the independent variable is Dosage, which has four levels d0, d15, d30, and d60.

Chapter 1.19;
Another dependent variable is the y-variable or output variable affected and changed. It is the one being measured.
The DOG task's dependent variable is the number of correct responses. They use to model ratio for the number of correct answers divided by drug dosage.

Chapter 2.13;
To graphically represent the mean scores for the groups - athletes and non-athletes on the control-in scores, we would need to divide the control-in score for the two groups in terms of mean and then graphically represent the data. This can be done using statistical software such as SPSS, Jamovi, etc. The data can be analyzed for descriptive statistics where the control-in scores can be the variable split by the sports.

A better way to display the data could be using a line graph, representing the data better. The bar graphs suggest a massive difference in the means for the groups- athletes and non-athletes. However, there is a difference of only about four scores. The data can be better represented using line graphs, which would indicate that the groups are of unequal sizes.

Descriptive	Sports	N	Mean	SD
Control-In	Athletes	25	24.32	4.525
	Non-Athletes	53	20.85	4.777

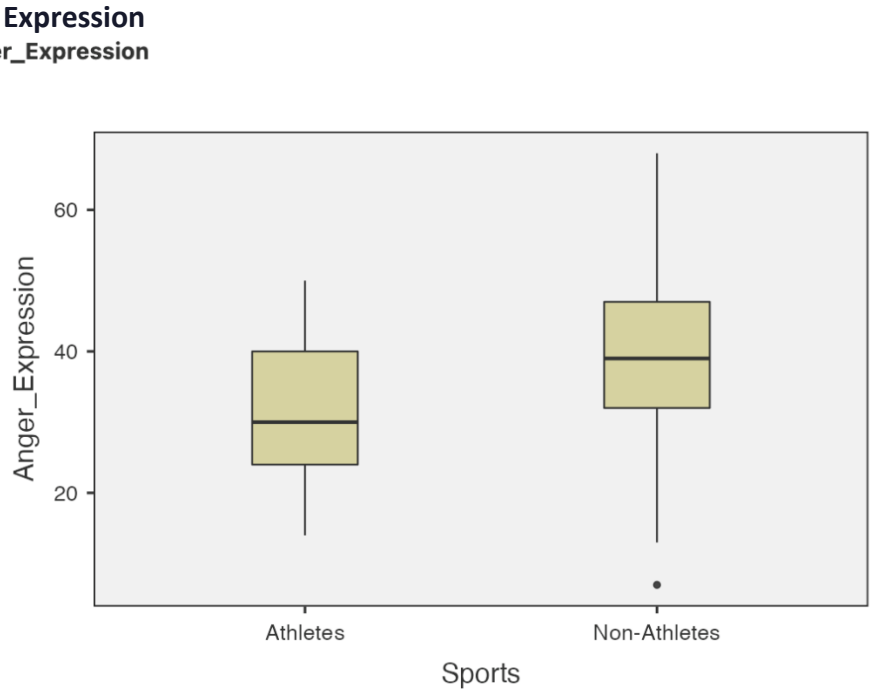


Chapter 2.14;

Box plots are used to identify outliers in the data set. The task requires creating box plots for anger expression scores based on the sports participation, i.e., the two groups, would-be athletes and non-athletes.

There seems to be an outlier for non-athletes, a score significantly different from the group's mean.

Based on the graph, it can be seen that the non-athletes group expressed more anger than the athlete's group.



Chapter 3.20

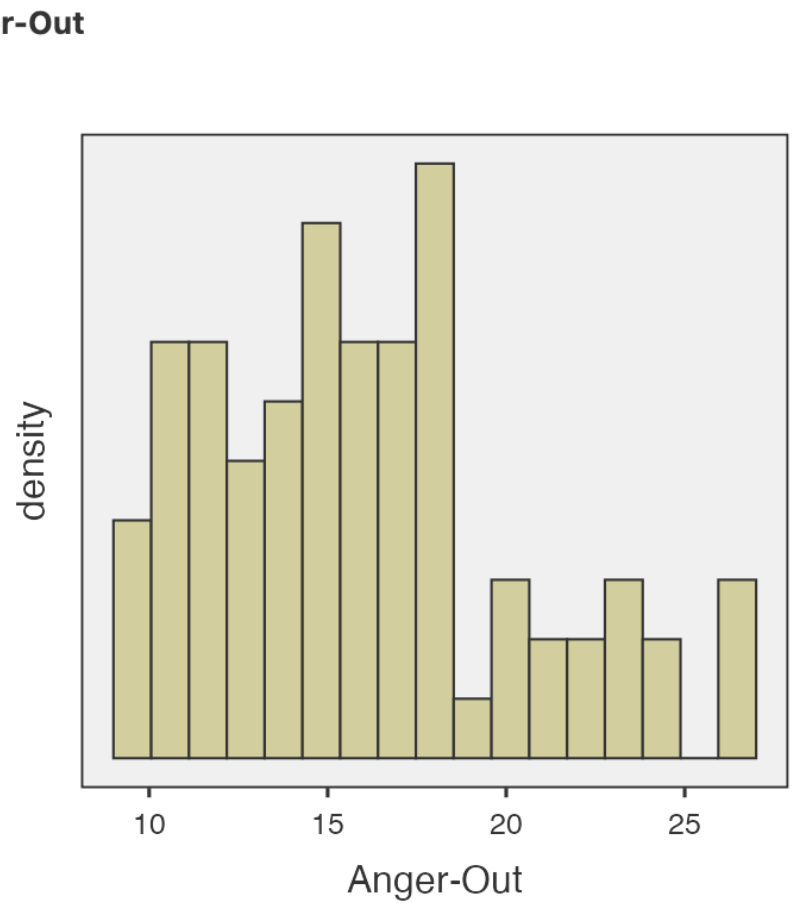
A histogram needs to be created to understand the skew of the curve for the data set on anger-out for all the participants.

Skew means that the bulk of the scores in the distribution was located either before or after the mean.

- When the data is not skewed, it is usually distributed.
- When the data is positively skewed, the bulk of the scores are located before the mean.
- When the data is negatively skewed, the bulk of the scores are located after the mean.

From the histogram, it can be seen that the bulk of the scores is located before the mean. Thus, the data set for anger out is positively skewed. This means that most people reported expressing their anger physically and verbally.

Anger-Out



Chapter 3.23;

To study the variance (a measure of variability in the data set) for the control-in scores for the groups- athletes and non-athletes, descriptive statistics can be used where the data would be analyzed using software to calculate the variance for the two groups.
The table shows that the variance of the Control-In scores for the athletes is 20.48, while the variance of the Control-In scores for the non-athletes is 22.82.

Descriptive	Sports	N	Mean	Variance
Control-In	Athletes	25	24.32	20.48
	Non-Athletes	53	20.85	22.82