

Glossary

Experiment: An experiment is a device to obtain answers to some scientific query

Analysis of Variance: breaking down of total variation into orthogonal components

Three way analysis of variance : A statistical test used to determine the effect of three nominal predictor variables on a continuous outcome variable

ANOVA - a statistical method for making simultaneous comparisons between two or more means;

Model: Mathematical equation specified by theory

Factor: Nominal independent variable in ANOVA

Treatment: Various objects of comparison in a comparative experiment are called treatments.

Independent variable: Casual variable in a model

Dependent Variable: Outcome or variable caused by the independent variable

degrees of freedom"- number of independent values in the final calculation of a statistic

null hypothesis : is a term that often use to indicate the statistical hypothesis tested

Least square estimates: A method of determining parameters of the model that best describes the relationship between expected and observed sets of data by minimizing the error sum of squares

SST- Total Sum of Square-Total variability in the data

SSE-Error sum of square=a sum of squares of the differences of the observations within treatments averages

SSTR – Treatment sum of squares-sum of squares of the differences between the treatment averages and the grand average

SSB – Blocksum of squares-sum of squares of the differences between the block averages and the grand average

SSR – Row sum of squares-sum of squares of the differences between the Row averages averages and the grand average

F Distribution: Sampling distribution that is the ratio of two independent variances applied in ANOVA technique to test the hypothesis of homogeneity of several means

Statistics: computed from sample data

Test Statistics: Quantity computed from sample data used to evaluate the plausibility of a restricted model