

Identifying Statistical Procedures

Summary notes below based upon this table:

<http://www.bwgriffin.com/gsu/courses/edur8131/content/WhichStatisticalTestToUse.pdf>

1. Identify the IV and DV
2. Decide if IV is qualitative or quantitative; decide if DV is qualitative or quantitative
3. If the IV is qualitative, determine the number of categories. If only two categories, then likely you have
 - * chi square test of association if DV is qualitative also
 - * independent samples t-test if DV is quantitative
 - * correlated samples t-test if DV is quantitative and DV scores are linked or matched in some way
4. If the IV qualitative with more than two categories, then use
 - * ANOVA if DV is quantitative and no other IVs are present
 - * ANCOVA if DV is quantitative and other quantitative IVs are present
 - * chi square test of association if DV is qualitative also
5. If the IV is quantitative, then use
 - * correlation to determine relationship among two or more quantitative variables
 - * regression if one variable is DV and/or you wish to predict DV, or if you wish to model DV to examine how IVs are related to DV simultaneously (i.e., multivariate relationship rather than simple bivariate relationship).
6. If you have only one variable it will be either one-sample t-test or chi-square goodness-of-fit:
 - * use one-sample t-test if the variable is quantitative and you wish to compare mean against some set value or standard
 - * use chi-square goodness-of-fit if the variable is qualitative and you wish to determine whether frequencies of categories differ from some expected pattern of frequencies

The above assumes only the following statistical procedures are considered:

- (a) one-sample t-test
- (b) independent samples t-test
- (c) correlated samples t-test
- (d) chi square goodness-of-fit
- (e) chi square test of association
- (f) Pearson correlation
- (g) Linear regression
- (h) ANOVA