Summary of Parametric Statistics

Statistic	Purpose	APA Style	Description
Descriptive Statistics			
Mean	To provide an estimate of the population from which the sample was selected.	M = _____	Indicates the center point of the distribution and serves as the reference point for nearly all other statistics.
Standard Deviation	To provide an estimate of the amount of variability/dispersion in the distribution of population scores.	SD = _____	Indicates the variability of scores around their respective mean. Zero indicates no variability.
Measures of Effect Size			
Cohen's d	To provide a standardized measure of an effect (defined as the difference between two means).	d = _____	Indicates the size of the treatment effect relative to the within-group variability of scores.
Correlation	To provide a measure of the association between two variables measured in a sample.	r(df) = _____	Indicates the strength of the relationship between two variables and can range from –1 to +1.
Eta-Squared	To provide a standardized measure of an effect (defined as the relationship between two variables).	η^2 = _____	Indicates the proportion of variance in the dependent variable accounted for by the independent variable.
Confidence Intervals			
CI for a Mean	To provide an interval estimate of the population mean. Can be derived from both the z and t distributions.	____% CI [___, ___]	Indicates that there is the given probability that the interval specified covers the true population mean.
CI for a Mean Difference	To provide an interval estimate of the population mean difference. Can be derived from both the z and t distributions.	____% CI [___, ___]	Indicates that there is the given probability that the interval specified covers the true population mean difference.
Statistical Significance Tests			
One Sample t Test	To compare a single sample mean to a population mean when the population standard deviation is not known	t(df) = ____, p = ____	A small probability is obtained when the statistic is sufficiently large, indicating that the two means significantly differ from each other.
Independent Samples t Test	To compare two sample means when the samples are from a single-factor between-subjects design.		
Paired Samples t Test	To compare two sample means when the samples are from a single-factor within-subjects design.		
One-Way ANOVA	To compare two or more sample means when the means are from a single-factor between-subjects design.	$F(df_1, df_2)$ = ___, p = ___	A small probability is obtained when the statistic is sufficiently large, indicating that the set of means differ significantly from each other.
Repeated Measures ANOVA	To compare two or more sample means when the means are from a single-factor within-subjects design.		
Factorial ANOVA	To compare four or more groups defined by a multiple variables in a factorial research design.		

Note. Many of the statistics from each of the categories are frequently and perhaps often appropriately presented in tables or figures rather than in the text.