Flow chart for one dependent and one independent variable

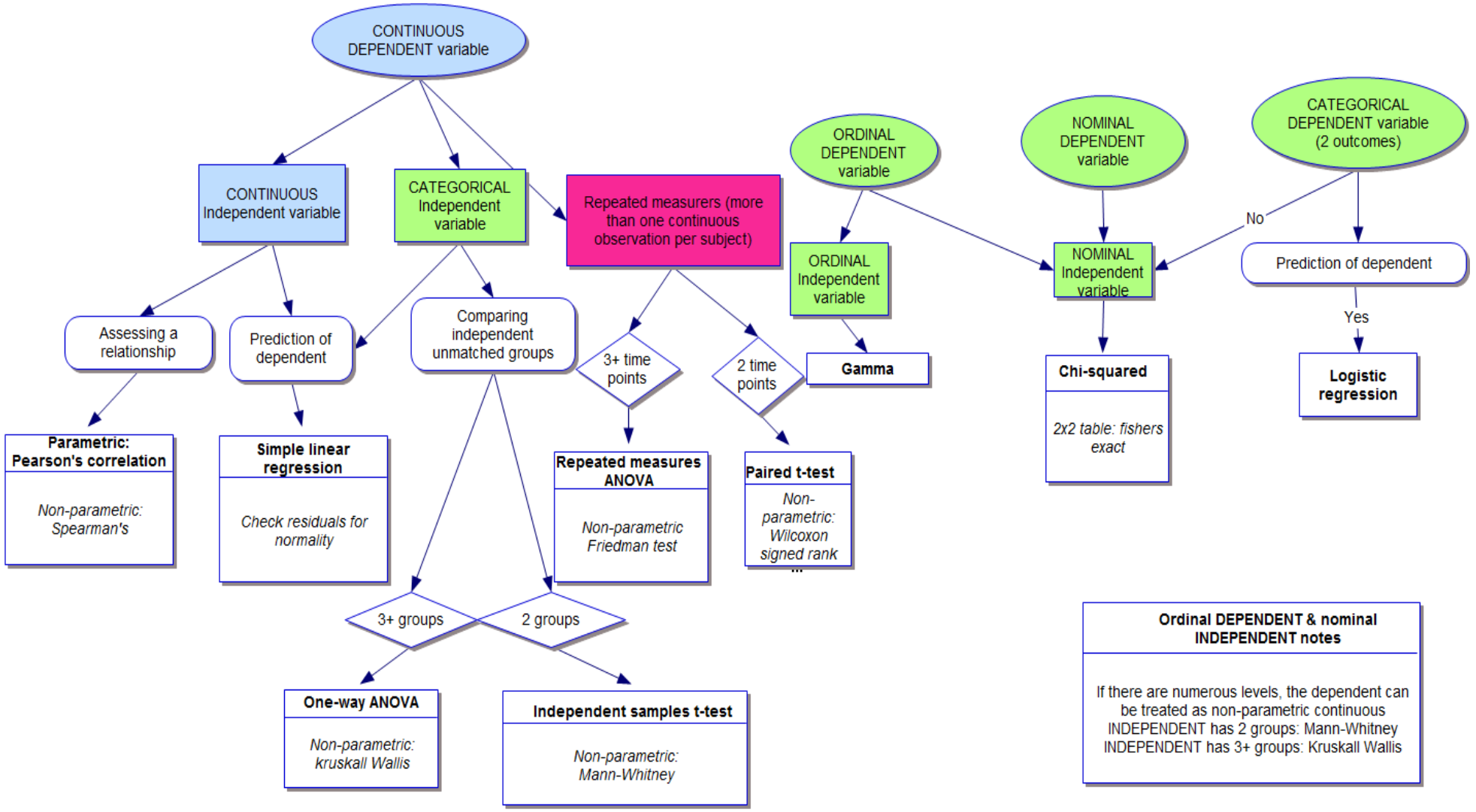

Table of tests	Dependent (outcome) variable	Independent (explanatory) variable	Parametric test	Non-parametric alternative
Comparing means				
The averages of two INDEPENDENT groups	Scale	Nominal/ binary	Independent t-test	Mann-Whitney test (Wilcoxon rank sum)
The averages of 3+ independent groups	Scale	Nominal	One-way ANOVA	Kruskal-Wallis test
The averages of 2 paired (matched) samples e.g. weight before and after a diet	Scale	Nominal Time/condition variable	Paired t-test	Wilcoxon signed rank test
The 3+ measurements on the same subject	Scale	Nominal	Repeated measures ANOVA	Friedman test
Investigating relationships				
Relationship between 2 continuous variables	Scale	Scale	Pearson's Correlation Coefficient	Spearman's Correlation Coefficient
Predicting the value of one variable from the value of a predictor variable	Scale	Any number of scale or binary	Simple Linear Regression	Transform the data
	Binary	Any number of scale or binary	Logistic regression	
Assessing the relationship between two Nominal variables	Nominal	Nominal		Chi-squared test

One scale dependent and several independent variables

1st independent	2nd independent	Test
Scale	Scale/ binary	Multiple regression
Nominal (Independent groups)	Nominal (Independent groups)	2 way ANOVA
Nominal (repeated measures)	Nominal (repeated measures)	2 way repeated measures ANOVA
Nominal (Independent groups)	Nominal (repeated measures)	Mixed ANOVA
Nominal	Scale	ANCOVA

Regression or ANOVA? Use regression if you have only scale or binary independent variables. Categorical variables can be recoded to dummy binary variables but if there are a lot of categories, ANOVA is preferable.