

# Diagram of Causal, Statistical Analysis Process

(Make decisions based on nature of data)

## Independent Variable

## Dependent Variable

### UNIVARIATE

For each variable separately

#### Central tendency

- nominal: mode
- ordinal: median
- interval/ratio: mean

#### Cases

- valid n
- missing n

#### Dispersion

- Nominal: % distribution, frequencies
- Ordinal: minimum/maximum, range
- interval/ratio: standard deviation

#### Normality

- mode=median=mean?
- histogram
- Kolmogorov-Smirnov

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### BIVARIATE

Relationship between IV and DV

nominal	Chi-square
nominal (k=2)	t-test
nominal (k>2)	ANOVA
ordinal/interval/ratio	Pearson correlation

#### Test

nominal
ordinal/interval/ratio
ordinal/interval/ratio
ordinal/interval/ratio

Report:  $\rho$ , test statistic ( $\chi^2$ ,  $t$ ,  $F$ ,  $r$ ),  
cellular counts, means

### MULTIVARIATE

Modeling impact of IVs upon DV

