PCA:

* The questions predict the component
* Analyzes ALL variance to reduce into groupings (components).
* Does not rotate (in a sense)
* Forces orthogonal groupings.

EFA

* the underlying factor predicts the questions
* Analyzes SHARED variance to reduce into groupings (factors)
* Rotates, so you can force orthogonal factors, but most agree that this does not happen in psychology so we use oblique rotations that allow us to fit correlated data.

Assumptions

* No missing data
* Outliers (multivariate)
* Multicollinearity
* Normal
* Linear
* Homogeneity
* Homoscedasticity

Rules

1. How many factors?

* Look at a scree plot
* Eigenvalues over one
* Parallel analysis

2. What questions to keep?

* Must load at >.3
* Must load on at least one
* Must load on only one
* Factors must have at least 2-3 questions loading on it

3. What is a good model?

* Makes sense
* Questions load on one factor each
* RMSEA/RMR = <.06 excellent, <.10 good
* GFI, AGFI, CFI, TLI, NNFI = >.95 excellent, >.90 good

4. What does it all mean?

* Look at pattern of loadings
* Interpret as a whole

Note.  Just like if you delete outliers, you must rerun after deleting questions or changing factors