

# Topic: Great Packages for Health Data Analytics

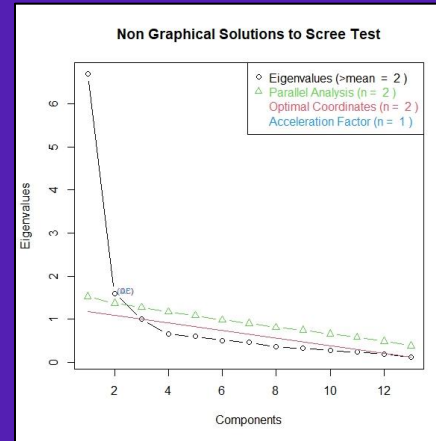
 Tricks for  **sas** Users



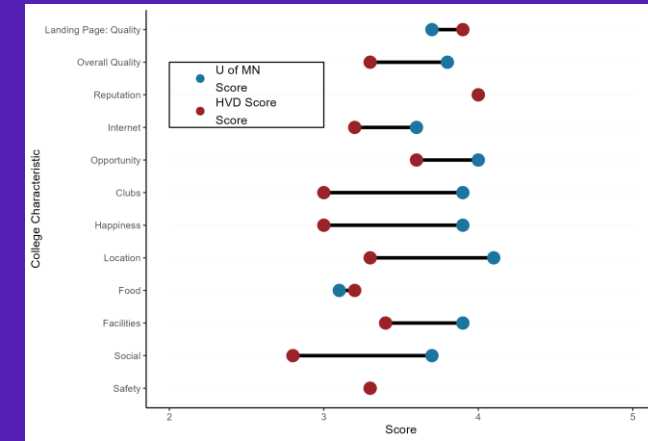
# Welcome to Today's Lecture!

## Today's Lecture

- R packages I use for factor analysis
- Non-ggplot2 R packages I use for visualizations

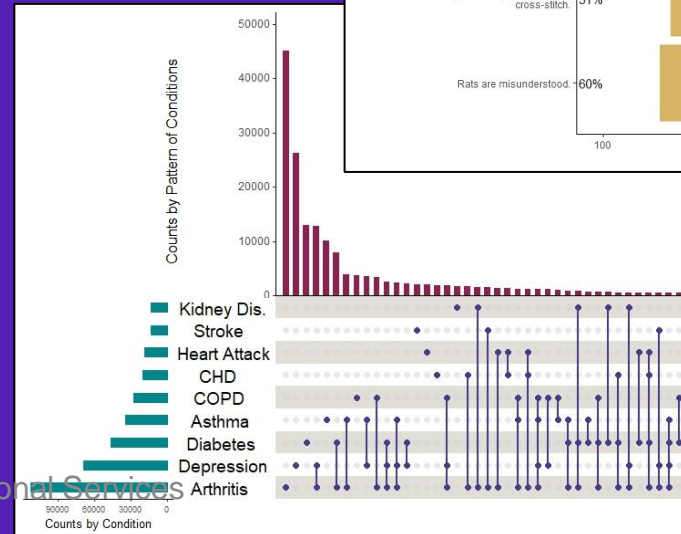
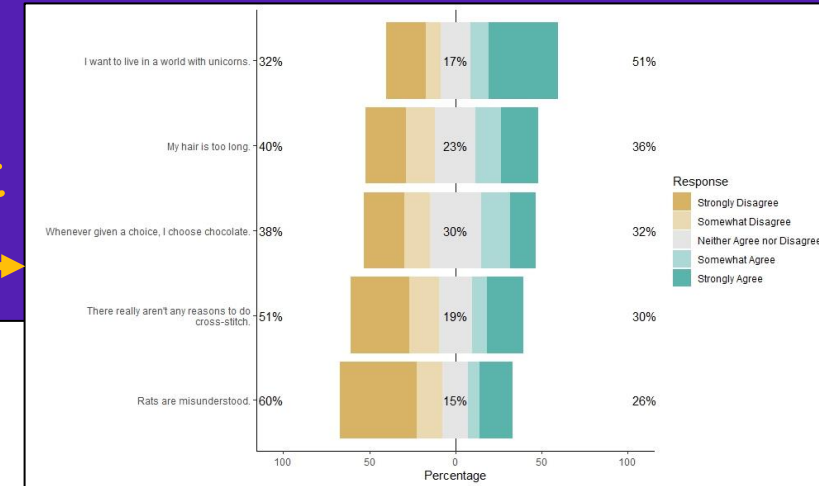


Scree Plot



Dumbbell Plot

Likert Plot



Upset Plot



## Plot Packages (Besides ggplot2)

- Ggplot2 is awesome – nothing wrong with it!
- A few special R plots for SAS users
- I made blog posts about them
  - Explains a use-case
  - Include code and examples

## Plot Resources

Upset plot blog post:

<https://dethwench.com/making-upset-plots-in-r-with-upset/>

Likert plot blog post (with link to factor analysis code):

<https://dethwench.com/likert-plot-data-hack/>

Dumbbell plot blog post:

<https://dethwench.com/dumbbell-plot-for-comparison-of-rated-items/>



# Factor Analysis

- In SAS is good with factor analysis. PROC FACTOR gives you what you need (with options).
- In R, you have to piece together what you need.
- Showcasing two packages: *psych* and *nfactors*
- I will show code and output for examples (from an actual use-case)
- We developed an instrument with three domains and multiple items on each domain
- We wanted to do confirmatory factor analysis (CFA) to confirm our items onto the domains we preselected

## Factor Analysis Resources

*psych* package: <https://cran.r-project.org/web/packages/psych/index.html>

*nfactors* package: <https://cran.r-project.org/web/packages/nFactors/index.html>

Abstract from paper published  
<https://tpls.academypublication.com/index.php/tpls/article/view/5928>



## Questions?

**Facilitator:** Monika M. Wahi, MPH, CPH

Email:

[dethwench@gmail.com](mailto:dethwench@gmail.com)

Blog:

<https://dethwench.com/blog/>

LinkedIn:

<https://www.linkedin.com/in/dethwench/>

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