Digital Tools for your Tool Box

Natasha Aduloju-Ajijola, PhD, MPH

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Why use Digital Tools?

The purpose of this lecture is not to teach you ALL the tools that are available but rather to let you know what tools are available so that you can pick and choose what you want to learn.
I have done nothing
productive all day

A common graduate student and post doc feeling

Who am I?
Never FEAR Digital Tools are HERE!

Step 1: Brain Dump

Get your ideas out of your head

- Pens that syncs with your phone
- Mind maps
- Talk it out
Finding Literature

- Pubmed
- Google Scholar
- Web of Science
- The list goes on and on

Keeping track of literature

- Excel
- Word
Citation managers

- Endnote
- Mendeley
- Zotero
- Refworks
- BibTex

- Keeps track of all your articles
- A body of knowledge that's yours

Productivity across devices

- One note
- Google keep
- Evernote
- Dropbox
- Box

pdf readers

Reference Manager Overview

compiled by Martin Fenner
Version 2.4, September 19, 2010
Yay! You found *ALL* the literature but how to quickly get it into your citation manager?

*There's an app for that*
Step 2: Write and Cite

Write and cite using your citation manager

Many citation managers have word pluggins that integrate with Word, to let you cite your literature as you write your document.
R via Rstudio

Use packages like citr to cite your R packages and literature.

Import bibtex files into R from citation managers.
Data Analysis

- Spss
- SAS
- Stata
- R
I am not a paid spokesperson for R

I am only a Post Doc in Love with a statistical software

Make functions for common tasks
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Overall No. (%)</th>
<th>Men No. (%)</th>
<th>Women No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Screenings in the previous 12 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>218 (92%)</td>
<td>58 (95.1%)</td>
<td>160 (90.9%)</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>186 (78.5%)</td>
<td>50 (82%)</td>
<td>136 (77.3%)</td>
</tr>
<tr>
<td>Glucose</td>
<td>161 (67.9%)</td>
<td>42 (68.9%)</td>
<td>119 (67.6%)</td>
</tr>
<tr>
<td>STI</td>
<td>27 (11.4%)</td>
<td>7 (11.5%)</td>
<td>20 (11.4%)</td>
</tr>
<tr>
<td>Asthma</td>
<td>26 (11%)</td>
<td>7 (11.5%)</td>
<td>19 (10.8%)</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>38 (16%)</td>
<td>11 (18%)</td>
<td>27 (15.3%)</td>
</tr>
<tr>
<td>Stroke</td>
<td>13 (5.5%)</td>
<td>1 (1.6%)</td>
<td>12 (6.8%)</td>
</tr>
<tr>
<td>Thyroid condition</td>
<td>38 (16%)</td>
<td>3 (4.9%)</td>
<td>35 (19.9%)</td>
</tr>
<tr>
<td>Cancer</td>
<td>115 (48.5%)</td>
<td>23 (37.7%)</td>
<td>92 (52.3%)</td>
</tr>
<tr>
<td>Gestational diabetes</td>
<td>11 (4.6%)</td>
<td>4 (6.6%)</td>
<td>7 (4%)</td>
</tr>
<tr>
<td>Mental Health</td>
<td>16 (6.8%)</td>
<td>2 (3.3%)</td>
<td>14 (8%)</td>
</tr>
<tr>
<td>Health Conditions a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>157 (66.2%)</td>
<td>39 (63.9%)</td>
<td>118 (67%)</td>
</tr>
<tr>
<td>Diabetes</td>
<td>65 (27.4%)</td>
<td>16 (26.2%)</td>
<td>49 (27.8%)</td>
</tr>
<tr>
<td>Healthy Lifestyle Behaviors and Weight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had at least a serving of vegetables/day</td>
<td>63 (26.6%)</td>
<td>10 (16.4%)</td>
<td>53 (30.1%)</td>
</tr>
<tr>
<td>Had at least 1 serving of fruits/day</td>
<td>63 (26.6%)</td>
<td>8 (13.1%)</td>
<td>55 (31.2%)</td>
</tr>
<tr>
<td>Exercised 150 minutes+/week</td>
<td>99 (41.8%)</td>
<td>32 (52.5%)</td>
<td>67 (38.1%)</td>
</tr>
<tr>
<td>BMI (SD)</td>
<td>33.3 (7.3)</td>
<td>31.7 (5.6)</td>
<td>33.9 (7.7)</td>
</tr>
</tbody>
</table>
Embed analysis for results
Participants (N = 542) were primarily female (64%, n = 347) and ranged in age from 18 to 65 (mean age = 42.3, SD = 13.5), as shown in Table-1. The majority of the participants identified as heterosexual (85.2%, n = 462), Baptist (36.2%, n = 196), single (38.2%, n = 207), and have an income of over $3,000 a month (33.4%, n = 181). Additionally, 64.6% (n = 350), had completed at least some college. The majority of the sample had an annual exam with their physician within the past 12 months (69.9%, n = 379, private insurance (42.6%, n = 231), and had children (74.9%, n = 406). In the previous 6 months in regards to sexual activity, most participants reported having had vaginal sex (63.5%, n = 344).

The document pulls the numbers from the data...which means that you don't have to update and recheck the number 20 million times!

Can also switch between datasets quickly!
Journal Submissions

Switch output quickly between styles
Other types of analysis

Geographic Information Systems

Qualitative analysis

BlaqOut Participants Kansas City

freq

0.0

12.5

10.0

7.5

5.0

2.5

0.0

RQDA: Qualitative Data Analysis

- Project
- Open Project
- Close Project
- Project Memo
- Backup Project
- Save Project As
- Clean Project
- Close All Codings

Path of current project:
No project is open.

Author: <ronggui.huang@gmail.com>
Help: click to join rqda-help mailing list

License: BSD
Version: 0.3-1 Year 2018
About
Beyond Research

This is all well and good, **BUT** you can do so much more!

**Cover Letters**

Natalia Adaliso Aiijida, PhD, MPH
Kansas City, MO, 64108

February 11, 2019

Drs. [Redacted]
Health Policy and Management
Health
Baltimore, MD

Dear Drs.

With this letter, I hereby wish to apply for the Post-Doctoral Fellow position at the Johns Hopkins Bloomberg School of Public Health in Baltimore, MD.

Currently, I work at the University of Missouri - Kansas City School of Medicine's Department of Biomedical and Health Sciences. I am a Post Doctoral Fellow for the Community Health Research Group (CHRG). We collaborate with community and faith-based organizations to address health disparities such as HIV/AIDS, diabetes, heart disease and stroke, and mental health among African American communities and community members in the Kansas City, Missouri and Kansas area. As a TL1 Post Doctoral Fellow, I received grant funding to culturally and religiously tailor the ARTAS strength-based system to increase the number of African Americans living with HIV, linked and retained in care. In addition, I am the primary investigator of a study of a health needs assessment for black men who have sex with men, and the co-investigator of a multisite college student sexual health study.

As you may note in my CV, my doctorate (obtained in 2016) is in Health Education and Promotion, a subset of Public Health. I am a sexual health researcher, with experience in implementation and evaluation. During my doctorate, I worked for the Office of Assessment and Planning, to evaluate the programs and activities conducted by multiple departments at the University of Alabama. In my current position with CHRG, I have worked with longitudinal studies and longitudinal data through the "Taking it the Next Steps" research study, a longitudinal HIV testing intervention in African American Churches. As well as conducting secondary data analysis of data collected before my tenure with the group. During my time as a Post Doctoral Fellow, I have collected primary data from
Unnecessarily Complicated Research Title

John Smith¹, James Smith²,³, and Jane Smith⁴

1. Department and University One; 2. Department and University Two; 3. Department and University Three

Materials

The following materials were required to complete the research:

- Carboxi-pellettesque digitigrade
  - Sublist definition
  - Sublist notation
  - Sublist section
- Sublist concept
- Sublist example
- Sublist notation
- Sublist concept
- Sublist example

The materials were prepared according to the steps outlined below:

1. Carboxi-pellettesque digitigrade
2. Sublist definition
3. Sublist notation
4. Sublist concept

Methods


Important Result


Introduction


Mathematical Section

\[ E = mc^2 \]

\[ \cos \theta = \frac{1}{E} \]

Results

![Image](image-url)

Contact Information

- Email: john@example.org
- Telephone: (123) 456-7890

References

This presentation

I have learned that there are many digital tools out there to help you with whatever you work on. If it is something you need to do that is taking up your time, there is probably an app for that. All you have to do is google it.
Thank you for listening

Acknowledgements

A special thank you to Dr. Steve Simon and Dave Walsh for ALL the help

- The University of Kansas Center for Research Methods and Data Analysis (CRMDA)
- Community Health Research Group
- Frontiers: University of Kansas Clinical and Translational Science Institute
- My mentor Dr. Jannette Berkley-Patton

Slides created via the R package xaringan.

Also used the rladies theme from @apreshill https://alison.rbind.io/post/r-ladies-slides/

The chakra comes from remark.js, knitr, and R Markdown.