Do No Harm with Data Viz

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@fleecealeece

Sample - Columbia Planograph

RESIDENTIAL SECURITY MAP

— LEGEND —

A FIRST GRADE
B SECOND GRADE
C THIRD GRADE
D FOURTH GRADE
SPARSELY SETTLED (COLOR INDICATES GRADE)
INDUSTRIAL & COMMERCIAL

PREPARED BY
DIVISION OF RESEARCH & STATISTICS
HOME OWNERS' LOAN CORPORATION. APR. 3, 1937

CITY OF
RICHMOND
VIRGINIA
AND ENVIRONS
DEPARTMENT OF PUBLIC WORKS
1923

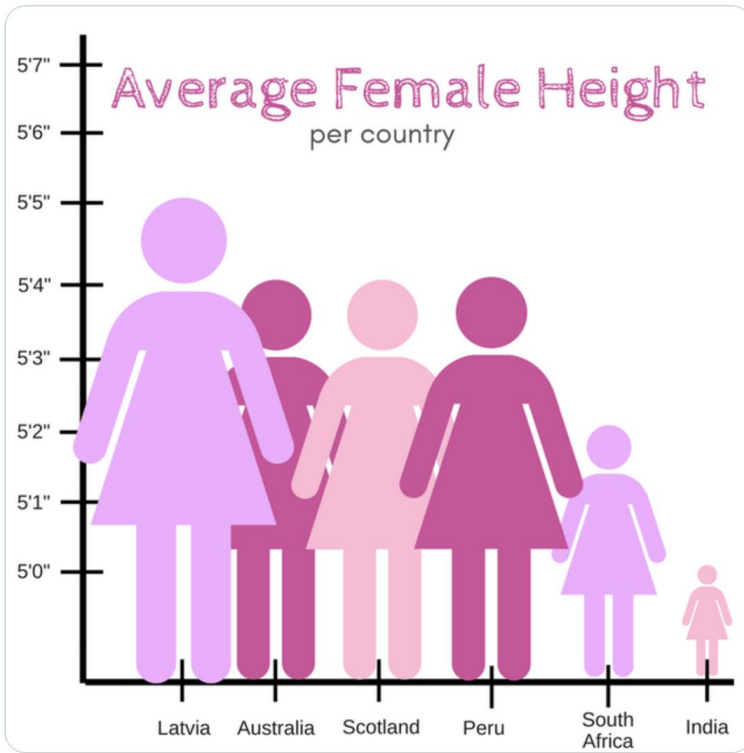Average Female Height per country

Sabah Ibrahim
@reina_sabah

As an Indian woman, I can confirm that too much of my time is spent hiding behind a rock praying the terrifying gang of international giant ladies and their Latvian general don't find me

6:58 PM · Aug 6, 2020 · Twitter Web App

"If I were one of the data points on this data visualization, would I feel offended?"

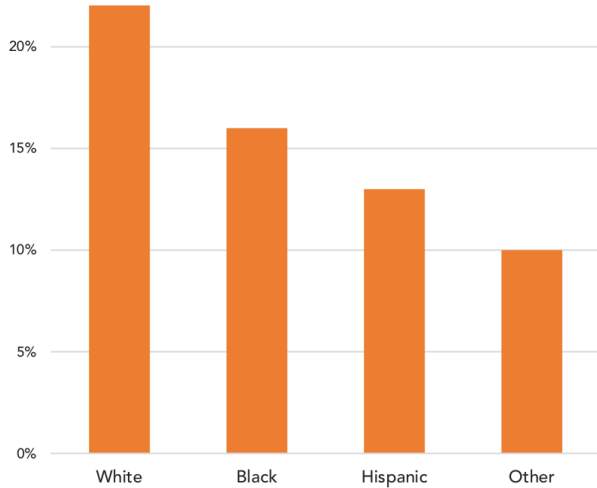-Kim Bui

Using language with an equity awareness

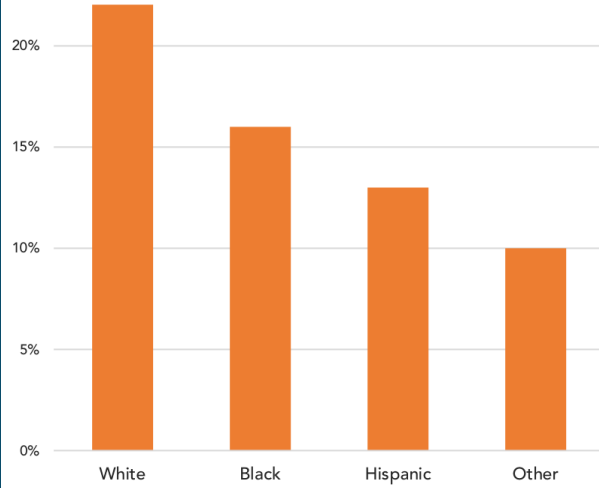Do my title, annotations, notes, etc. explicitly **mention forces of oppression and historical context**?

Mental Health in Jail
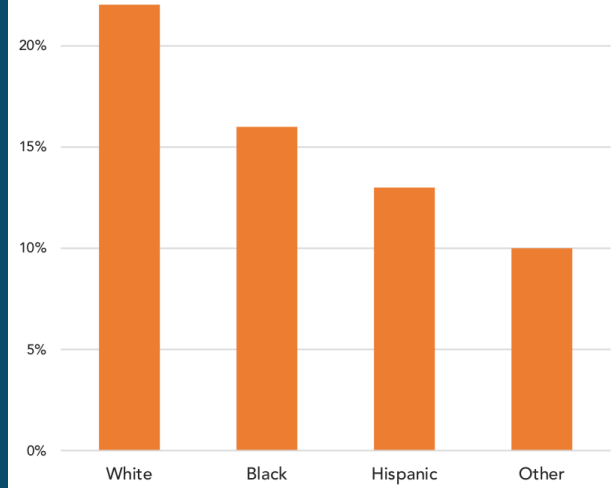Rate of mental health diagnosis of inmates

20%
15%
10%
5%
0%

White   Black   Hispanic   Other

Racism in Jail
People of color less likely to get mental health diagnosis

20%
15%
10%
5%
0%

White   Black   Hispanic   Other

Racism in Jail
White people get more mental health diagnoses

20%
15%
10%
5%
0%

White   Black   Hispanic   Other

Example taken from *Data Feminism* by Catherine D'Ignazio and Lauren Klein

Using language with an equity awareness

Does my title, annotations, notes, etc. explicitly mention forces of oppression and historical context?

Do my labels use **people-first language**?

Using language with an equity awareness

Does my title, annotations, notes, etc. explicitly mention forces of oppression and historical context?

Do my labels use people-first language?

Do my labels reflect the terms the community I'm visualizing **prefer**?

Ordering Data Purposefully

Ordering data purposefully

Which group am I presenting first? **Why**?

9. What is Person 1's race?

Mark ☒ one or more boxes **AND** print origins.

☐ White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.* ⟍

☐ Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.* ⟍

☐ American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.* ⟍

☐ Chinese   ☐ Vietnamese   ☐ Native Hawaiian
☐ Filipino   ☐ Korean   ☐ Samoan
☐ Asian Indian   ☐ Japanese   ☐ Chamorro
☐ Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.* ⟍   ☐ Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.* ⟍

☐ Some other race – *Print race or origin.* ⟍

RACE

I am going to read you a list of five race categories. You may choose one or more races. For this survey, Hispanic origin is not a race. (Are/Is) (NAME/you) White; Black or African American; American Indian or Alaska Native; Asian; OR Native Hawaiian or Other Pacific Islander?

◆ Do not probe unless response is Hispanic or a Hispanic origin
Enter all that apply, separate with commas

1   White
2   Black or African American
3   American Indian or Alaska Native
4   Asian
5   Native Hawaiian or Other Pacific Islander
6   Other - DO NOT READ

```
IN PERSON VERSION:
(SHOW CARD 20)
Please look at this card.  Which of these categories do you
feel best describe you: (white, black or African-American,
Hispanic or Latino, Asian, American Indian or Alaska Native,
Hawaiian Native or other Pacific Islander, or another
race?)

TELEPHONE VERSION:
Which of these categories do you feel best describe you:
white, black or African-American, Hispanic or Latino,
Asian, American Indian or Alaska Native, Hawaiian Native
or other Pacific Islander, or another race?

CODE ALL THAT APPLY: CODE RESPONSES IN THE ORDER THEY ARE GIVEN

    1.    *WHITE (INCLUDE MIDDLE EASTERN/ARAB WITH WHITE);
          Caucasian
    2.    *BLACK/AFRICAN-AMERICAN
    3.    *HISPANIC/LATINO
    4.    *ASIAN
    5.    *AMERICAN INDIAN/ALASKA NATIVE
    6.    *NATIVE HAWAIIAN/PACIFIC ISLANDER
   -7.    *OTHER
    0.     Inap. (/no further responses)
*********************************************
    FOR THE PUBLIC DATA SET:
    ONLY X6809 AND X6810 ARE INCLUDED.
    FOR X6809, CODES 4, 5, AND 6 ARE
    COMBINED WITH CODE -7.
    IF AN ADDITIONAL RESPONSE WAS GIVEN IN X6810-X6814,
    X6810 IS SET TO 1; OTHERWISE X6810 IS SET TO 5.
*********************************************
```

L7. What is your race? Are you white, black, American Indian, Alaska Native, Asian, Native Hawaiian or Other Pacific Islander?

- ENTER all that apply
- **PROBE:** Any others?
- If R says something not listed in response options, record under [7. Other] and list response verbatim at "specify screen"

1. White	2. Black, African-American, or Negro
3. American Indian or Alaska Native	4. Asian
5. Native Hawaiian or Pacific Islander	7. Some other race-specify

→ L7OS. Specify (String 500)

Ordering data purposefully

Which group am I presenting first? Why?

Can my results be **ordered differently**?

- Does my study focus on a specific community?
- Is there a particular story or argument I am trying to tell?
- Is there a quantitative relationship (i.e., population size, effect size, etc) between groups? Can they be ordered alphabetically?

Choosing colors and icons with sensitivity and inclusiveness

Choosing colors and icons with sensitivity and inclusiveness

Do my colors and icons **avoid reinforcing stereotypes and power hierarchies**?

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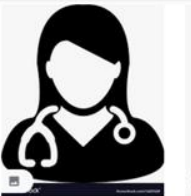
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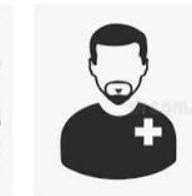
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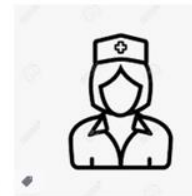
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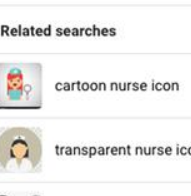
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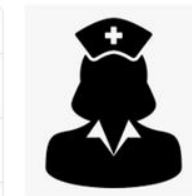Male Nurse Icon High Res...
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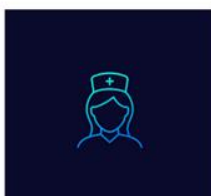iconscout.com · In stock

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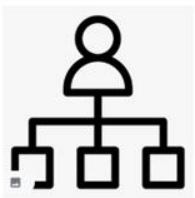thenounproject.com

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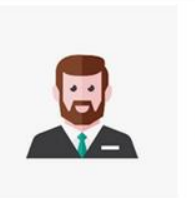iconfinder.com · In stock

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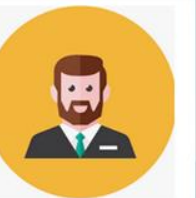Check out boss icon created ...
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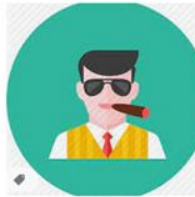vectorstock.com

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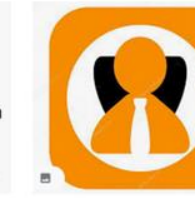Boss icon - Download on Iconfi...
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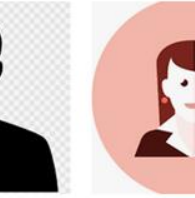thenounproject.com

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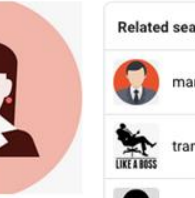
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Choosing colors and icons with a racial equity awareness

Do my colors and icons avoid reinforcing stereotypes and power hierarchies?

Do my icons and images show people as **empowered and dignified** rather than as helpless victims?

Data viz is just one part of a larger data ecosystem

Engaging lived experiences

Did my project **seek out and engage with community partners** to help me better understand the topic I am studying?

Is the community **seeing benefits** from the work I am doing? Do my goals align with theirs?

Were community members given an **opportunity to weigh in** on the design of the project?

Were final results **shared with the community first** before publication so they could provide feedback?

Examining the data behind the viz critically

How were these data **generated**?

Are these data **representative**?

Who is **included** and who is **excluded** from these data? Whose voices, lives, and experiences are missing?

Why were these data collected? Who stands to benefit?

Who might be **harmed** by the collection or publication of these data?

Embodying diversity and inclusivity in data teams and organizations

What is my identity as an **individual**?

What are the identities held in my **team**?

What is the identity of my **organization**?

Do no harm with data viz

21 DIVERSITY, EQUITY, AND INCLUSION IN DATA VISUALIZATION: GENERAL RECOMMENDATIONS

- **Critically examine your data.**
  - Understand where your data come from, who is included and excluded from these data, how these data were collected, why they were collected, and who benefits or is harmed by them.

- **Use people-first language.**
  - Start with the person, not the characteristic such as "people with disabilities," "a person with asthma," or "communities of color."

- **Label people, not skin color.**
  - Use full labels such as "Black people" rather than "Black."
  - Remember that language continues to evolve. Certain labels that may have been acceptable years ago may no longer be.

- **Order labels purposefully.**
  - Don't simply order data in tables, graphs, and charts as they are ordered in the data, which may reflect historical biases. Consider alternative sorting parameters such as study focus, specific story or argument, quantitative relationship (i.e., magnitude of the results), alphabetical, or sample size (weighted or unweighted).

- **Consider missing groups.**
  - What groups are not included in your data? Consider adding notes to highlight how the data are not inclusive or representative.
  - Consider alternatives to labeling the "other" catch-all category:
    - *Another*
    - *Another race*
    - *Additional groups*
    - *All other self-descriptions*
    - *People identifying as other or multiple races*
    - *Identity not listed*
    - *Identity not listed in the survey*

- **Carefully consider colors.**
  - Avoid reinforcing gender or racial stereotypes, such as by using baby pink and baby blue to represent women and men or colors associated with skin tones or racial stereotypes.
  - Avoid using incremental color palettes (e.g., light to dark) to represent different demographic groups.

- **Consider icons and shapes.**
  - Recognize how readers might be better able to connect with the data by using small shapes or icons, but use them carefully.
  - Avoid stereotypical, discriminatory, and racist imagery.
  - Use images that show people as empowered and dignified, and avoid images that depict people as helpless victims.

- **Communicate with people and communities of focus.**
  - Reach out to the people and communities you are focusing on in your work and hoping to connect with through the final product.
  - Build teams and connections with outside groups to build and maintain these relationships. This kind of work takes time and effort.

- **Reflect lived experiences.**
  - Not everyone has the same experiences, especially when it comes to characteristics such as race, ethnicity, and gender. Consider what your work may be missing and seek out colleagues and communities to help identify them.

- **Consider the needs of your audiences.**
  - Make sure results are presented in a format that is useful to the audience.
  - Make sure the language used is written in a way that is easily understandable by your readers.
  - Consider translating your products into the languages used by your audiences.

22 THE RACIAL EQUITY IN DATA VISUALIZATION CHECKLIST

- [ ] Does the communicator understand the data they worked with, including how it was sourced, who was or was not represented in it, why it was collected, and who benefits or is harmed by having these data collected?
- [ ] Has the communicator carefully considered words, phrases, and labels that are used to describe people, groups, and communities?
- [ ] Has the communicator considered colors that are inclusive of different groups and that are accessible for people with different abilities?
- [ ] Has the communicator considered the order of numbers or estimates in tables, charts, and diagrams? Some options include sorting alphabetically or by magnitude of estimate/number, population size, and sample size (weighted or unweighted).
- [ ] Has the communicator considered alternative words or phrases for groups that may be classified as "other" in the original data? Some alternatives include another race; additional groups; all other self-descriptions; people identifying as other or multiple races; identity not listed; and identity not listed in the survey.
- [ ] Have all icons and images been reviewed with a racial equity lens?
- [ ] Would alternative graph types do a better job presenting the data? Do all groups need to be positioned within the same graph?

- [ ] Has the research team communicated with the people or communities that they are focusing on or wishing to communicate with? If not, what people, groups, or organizations can the team contact?
- [ ] Is the research team—and the organization more generally—diverse in its composition and work practices to be able to facilitate better understanding of different groups?
- [ ] Does the final communication product meet the needs of the audience or user?

Teams should consider these issues throughout the research and communication process. Use these checkboxes as a reminder:

- [ ] *Proposal development stage*
- [ ] *Strategic planning stage*
- [ ] *Data collection phase*
- [ ] *Analysis phase*
- [ ] *Data visualization phase*
- [ ] *Writing phase*
- [ ] *Editing phase*
- [ ] *Outreach and final publication stage*