

# Ethics in MLR

# Research Objective

**Research Background:** Recidivism is the tendency of a convicted criminal to reoffend. When considering parole for inmates, officers will give the Risky, Impulsive, & Self-destructive behavior Questionnaire (RISQ) - a 38-item self-report questionnaire that measures risky, impulsive, and self-destructive behaviors. From the questionnaire, a recidivism score is then “calculated” where positive values indicate “likely to reoffend” and negative indicate “unlikely to reoffend” and this score is used in sentencing hearings.

**Research Question:** What determines a person’s recidivism risk score?

**Population:** All prisoners in a county jail (the name of the county is not shared for privacy reasons).

**Sample:** A convenience sample of 4303 county prisoners who are up for parole.

# Recidivism Data

- sex
- age
- juv\_fel\_count = felony counts while a juvenile
- race (Af-American, Asian, Caucasian, Hispanic, Native, Other)
- juv\_misd\_count = juvenile misdemeanor count
- juv\_other\_count = other counts while juvenile
- PriorCount = number of previous felony counts
- is\_recid = Is this inmate already a recidivism case?
- is\_violent\_recid = Is this inmate a violent recidivism case?
- ChargeDegree = misdemeanor or felony
- DaysInJail
- RecidScore

# Interpreting the Results

A 95% confidence interval for  $\beta_{\text{Male}}$  is (-0.35, -0.06). How do we interpret this interval in context?

- All else being equal, we are 95% confident that males, on average, have between a 0.06 and 0.35 lower recidivism score.
- Does this interpretation have any moral implications?

# Analysis Through an Ethical Lens

Remember concepts introduced previously:

1. Ethical Statistical Practice
2. Recognizing and correcting unethical behavior in statistics
  - 3 characteristics to help recognize unethical data behavior:
    - Scale
    - Opacity (lacking transparency)
    - Damage
  - Discussion: Do you see any issues with our analysis of the recidivism score?

# Analysis Through an Ethical Lens

Data that goes into the recidivism score:

1. Arrest records
2. Questionnaire (example questions below)
  1. “Based on the screener’s observation’s, is this person a suspected gang member?”
  2. “How many prior \_\_\_\_\_ has this person been arrested for?”
  3. “How many of your friends/acquaintances have ever been arrested?”
  4. “Do you agree or disagree that hungry people have a right to steal?”

**Discussion:** What statements/questions stand out to you?

- Unconstitutional questions
- Preemptively punishing individuals for what they haven’t done
- Questions that are proxies for class and race

# Unconstitutional Questions

Question: “Does inmate have relatives/spouse that were in prison?”

- The idea of sending someone to jail because a family member was also a criminal would not hold up in court. It would be thrown out as unconstitutional.

# Preemptive Punishment

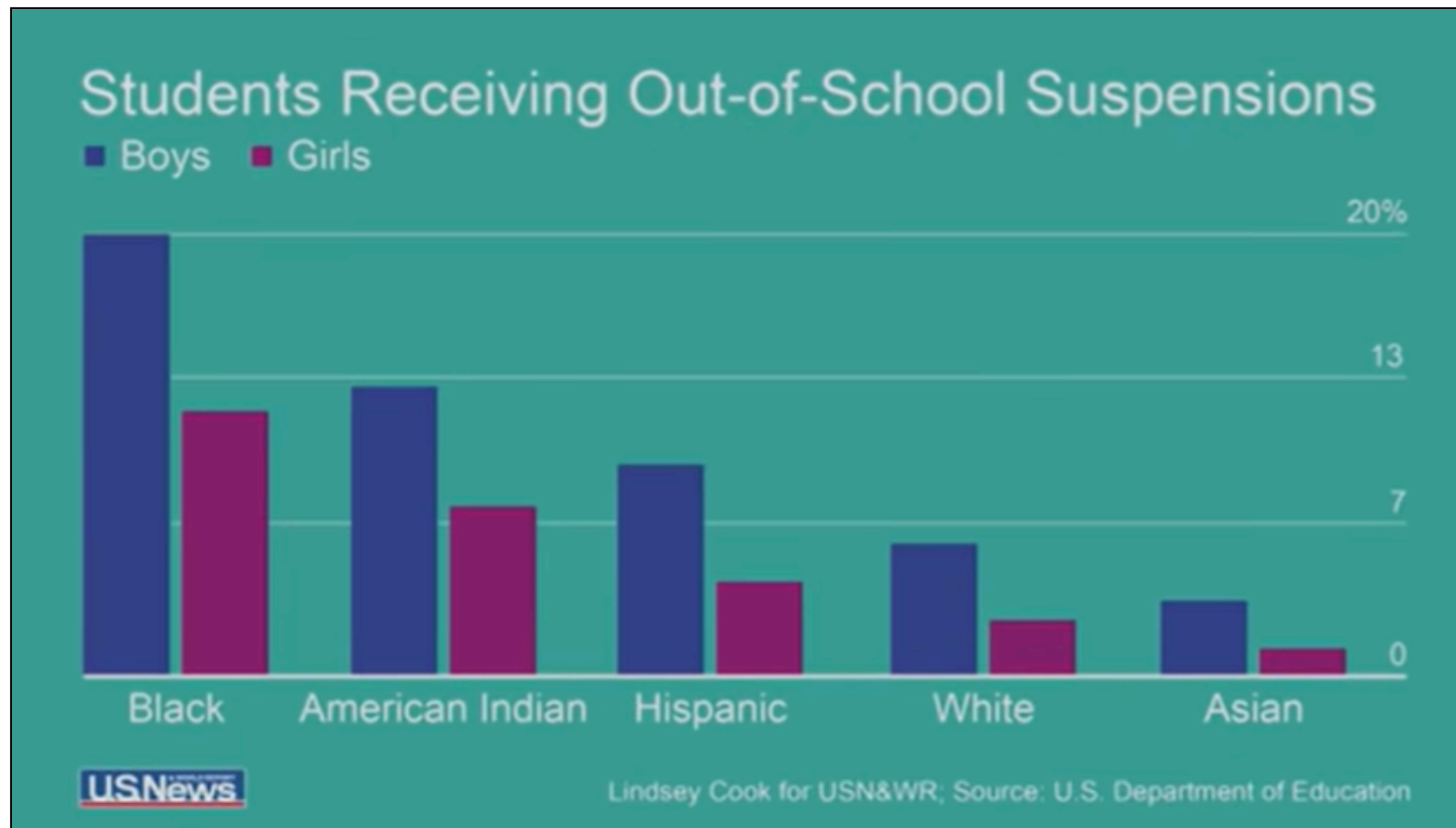
Question: “Do you feel the need to carry a weapon for protection?”

- Just because they carry a weapon doesn't mean they will necessarily commit a crime.



# Proxies for Class and Race

“Does inmate live in a high crime neighborhood?” or “Does inmate rely on social assistance/welfare?” or “Has inmate been suspended from school?”



# An Example You Might Encounter

Kroger is interested in hiring a cashier. They use a personality test as the first part of their hiring process. They say this helps gauge whether an applicant will “fit” into their work environment. Some of the questions are even taken from a list of psychological screening questions. If an applicant does not pass the personality test, they are immediately removed from the hiring process.

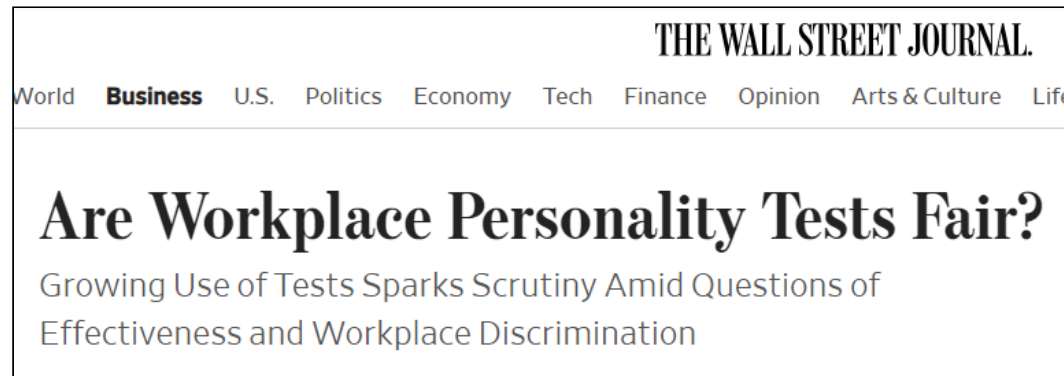
**Discussion:** Are there any issues with Kroger’s hiring approach?

- Violates the Americans with Disabilities Act, it is illegal to have a health exam as part of a job application
- Has the 3 characteristics of unethical behavior: scale, opacity, and damage

# Personality Tests

Another well known personality test is still used in the hiring process of many companies, the Myer-Briggs personality test.

- 75% of people get a different result when they take the exam a second time
- Has been found to have no scientific basis
- Cannot predict the success of individuals



# Responses to Unethical Behavior

- Become a whistle blower
- Have a conversation
- Report to superiors or HR
- Leave unethical environments, if necessary
- Establish guidelines or a code of conduct from the start

# Whistleblowers

An individual who informs on a person or organization engaged in an illicit activity.

**Discussion:** What are the pros and cons of being a whistleblower?

# A Recent Whistleblower Experience

- Gemini is a Google-AI chatbot that can help with a variety of tasks, namely creating images
- Google gave special instructions that when it was asked to generate images, it would include people with “diverse” racial backgrounds
- Users exposed this issue, forcing Google to stop the generation of humans in images and fix Gemini

## ***Google Chatbot’s A.I. Images Put People of Color in Nazi-Era Uniforms***

The company has suspended Gemini’s ability to generate human images while it vowed to fix the issue.

March 7, 2024

## The Miseducation of Google’s A.I.

Gemini, Google’s new chatbot, has provoked a fierce debate about social values and artificial intelligence.

 Transcript

# Have a Conversation

**Discussion:** Why would it be important to have a conversation before reporting to superiors, HR, or the government?

- Gain perspective
- Have an opportunity to ask ethical questions
- Suggest alternative solutions
- Express your concerns as needed

# Leaving Unethical Environments

- If all else fails, consider leaving the workplace
- While this may put an economic burden on you, in the long run, you don't want to stay in a position where you're asked to violate your morals or where advancement requires unethical behavior.





# Establish a code of conduct

**Discussion:** What are some ethical guidelines you would want in place?

- Informed consent
- Transparency
- Have every decision be reviewed by a human, especially when working with models
- Team responsibility, have everyone ask if the work is ethical

# Conclusions

## We are NOT saying:

- Don't use statistical analysis (and algorithms derived from data)
- All uses of data and algorithms are unethical

## We ARE saying:

- Be careful in how you use the data you collect
- Evaluate the potential for good (and bad) of your study & analysis

# Key Terminology

- Ethical considerations in regression
- Protected Class
- Whistleblower
- Proxies for Protected Classes
- Responses to Unethical Behavior