

# **RISK AND RACE**

Reimagining the Future of RNR

# **AGENDA**

The History and Rise of Risk Assessment

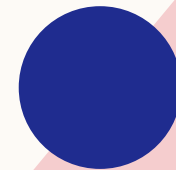
Defining Risk and Risk Theory

Use in Decision-making, Case Management

Risk and Racial Bias

Where Do We Go From Here?

Measuring Treatment-Based Outcomes



# **A HISTORY OF RISK**

**Risk is the likelihood of a negative occurrence**

**Risk assessment** is a process to identify potential hazards and analyze what could happen if a hazard occurs

Humans have used risk prediction for hundreds of years; 1600s probability theory in gambling, identifying risk of hazards and losses

## **Modern use of Risk Assessment:**

- Risk of heart disease
- Risk of hurricane impact
- Risk of nuclear accidents
- Risk of collision for insurance purposes
- Risk of wildfires
- Risk of COVID exposure

# RISE OF RISK ASSESSMENT IN CRIMINAL JUSTICE

First risk assessments in criminal justice were in the 1900s. Correctional staff used to assign risk of reoffending and were *entirely* judgement based.

The first actuarial parole prediction instruments date back to 1930s in Illinois but became more commonplace in the 1970s and 80s.

Third wave of risk assessment developed in 1980s and 90s that focused on rehabilitating individuals and reducing recidivism through identifying their needs and being responsive in addressing them.

Substantial increases in the use of tools.





# **DEFINING RISK**

*In Criminal Legal Settings*

# RISK =

- Probability of re-arrest for any charge
- OR
- Probability of committing violent re-offense
- Probability of failure to appear (FTA) <-  
NOT flight!
- Probability of intimate partner harm or homicide

# TYPES OF RISK TOOLS

PRETRIAL  
RISK TOOLS

LETHALITY  
ASSESSMENTS

RISK NEED  
RESPONSIVITY  
TOOL

# PRE-TRIAL RISK TOOLS

Most of the debate is around these tools

Measure:

- Risk of reoffending
- Risk of committing new violent offense
- Risk of failure to appear

Use can affect:

- Pretrial release
- Intensity of pretrial supervision
- Bail setting



# RISK NEED RESPONSIVITY TOOLS



## RISK PRINCIPLE: WHO TO TARGET

Target intervention intensity according to someone's risk level



## NEED PRINCIPLE: WHAT TO TARGET

Assess and respond to criminogenic needs to reduce recidivism



## RESPONSIVITY: HOW TO TARGET

Tailor interventions to the specific characteristics, culture, language, and learning style of the individual

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# **RISK & RACIAL BIAS**

# **RACIAL & ETHNIC DISPARITIES**

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Risk assessment has the potential to reduce or exacerbate disparities



# WHY IS THAT?

## Decrease Bias:

- Limits bias and problematic discretion in judges and prosecutors
- When done properly – it can guide outcomes towards higher release rates for Black and Brown defendants
- When paired with a needs assessment can be used to provide supportive interventions

# WHY IS THAT?

## Increase Bias:

- Bakes system bias into the risk scores
- Can be less accurate for Black and Brown individuals
- Can result in higher punitive sanctions or collateral consequences if there is mis-classification of risk

# RESEARCH IS MIXED

## Two approaches

- Risk levels associated with increasing recidivism regardless of race
- Decisions based on RNR produces less biased outcomes

Research is still developing on racial disparity at the item level

- Huang et al. (2020) found fairly large disparity in certain items
  - YLS was not predictive of recidivism for non-Indigenous youth

# IS THE TOOL INCREASING OR DECREASING DISPARITIES?

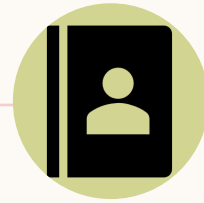
How to know if a tool is doing more harm  
than good

# THREE CONSIDERATIONS



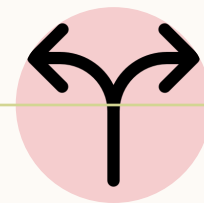
## THE TOOL

Is the tool itself perpetuating bias?



## HOW IS IT BEING USED

Human use of the tool can compound biased outcomes for individuals.



## WHERE IS THE TOOL USED

The point in the CL system the tool is used in can influence collateral consequences of bias.



# 1) IS THE TOOL BIASED?

A) Race is not included as question in the calculations

B) Factors included are not a proxy for race

C) The algorithm performs similarly across racial and ethnic groups



1.B

**HOW DO WE KNOW IF A  
FACTOR IS A PROXY???**

# RISK FACTORS


## Static risk factors

- ▶ **Criminal history**
  - ▶ # of arrests
  - ▶ # of convictions
  - ▶ type of offenses
- ▶ Current charges
- ▶ Age at first arrest
- ▶ Current age
- ▶ Gender

## Dynamic risk factors

- ▶ **Antisocial attitudes**
- ▶ **Antisocial friends & peers**
- ▶ **Criminal Thinking**
- ▶ Family/marital factors
- ▶ Education/poor employment history
- ▶ Pro-social leisure activities
- ▶ Substance use and misuse

***Are These Proxies?***



# **CRIMINAL HISTORY**

Is this a proxy?

# HOW BIAS IS IN THE NUMBERS

ARREST

CHARGING

PLEA

SENTENCING

PROBATION

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BIPOC Higher rates of  
arrest

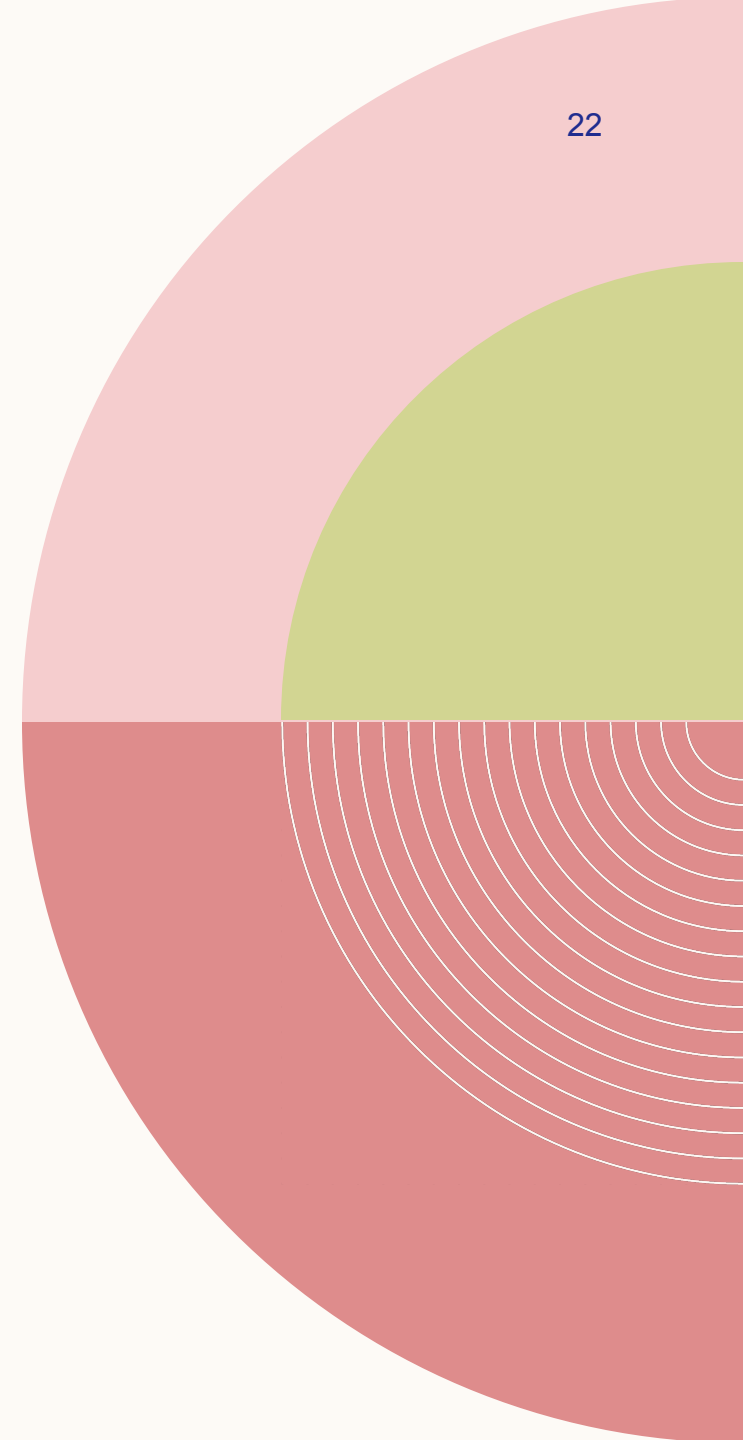
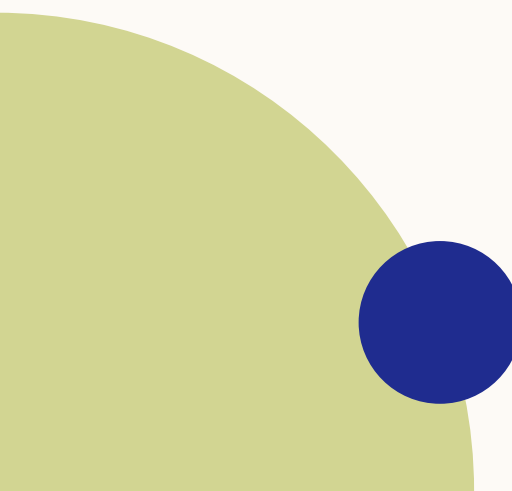
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BIPOC More likely to have  
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**HOW DO WE KNOW  
THERE ARE  
DISPARITIES IN THE  
JUSTICE SYSTEM?**



# SOURCES

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**ARREST**

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## CHARGING/ PLEA BARGAINING



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# PROBATION PAROLE

# HOW BIAS IS IN THE NUMBERS

ARREST

CHARGING

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PROBATION

BIPOC Higher rates of  
arrest

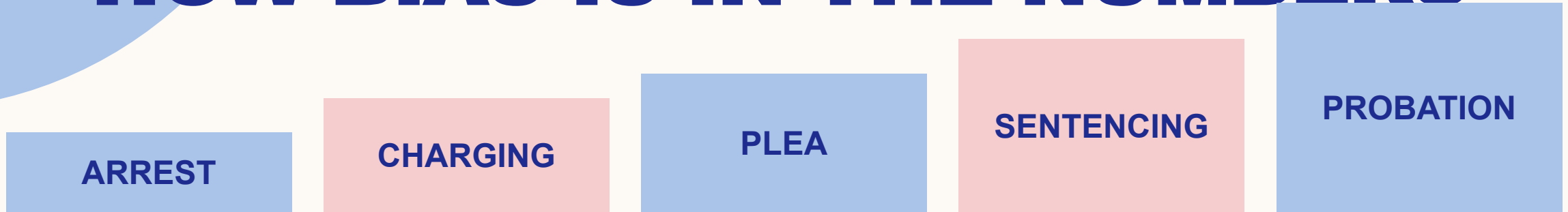
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# HOW BIAS IS IN THE NUMBERS



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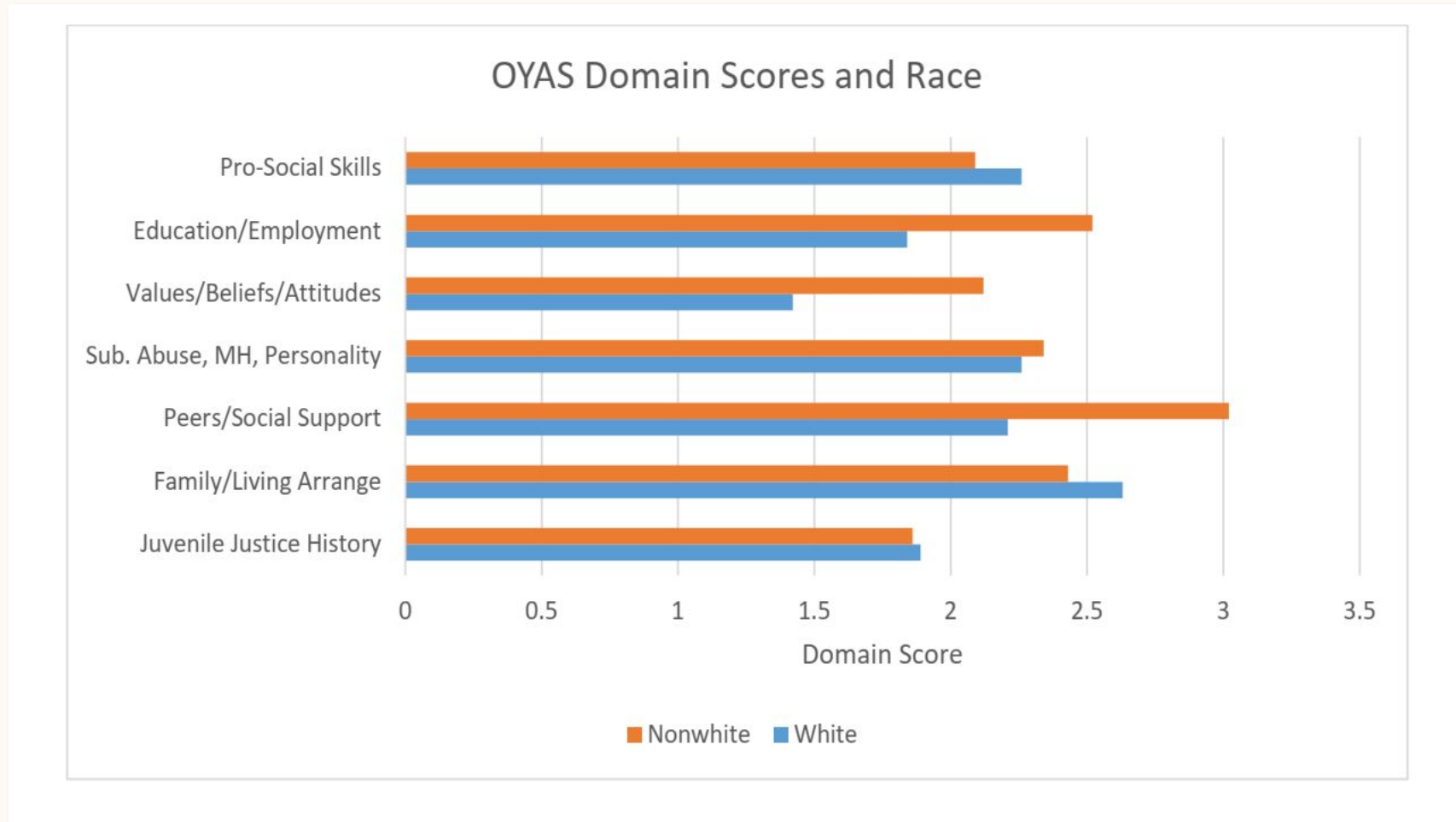
**CAN DYNAMIC  
FACTORS BE  
PROXIES?**

# REVIEW OF DIVERSION DATA

Youth Diversion for Behavioral Health Needs

- Youth assessed to identify appropriate programming
- Evaluated recidivism of youth after engaged in intervention

# OYAS AND RACE – REPLACE?

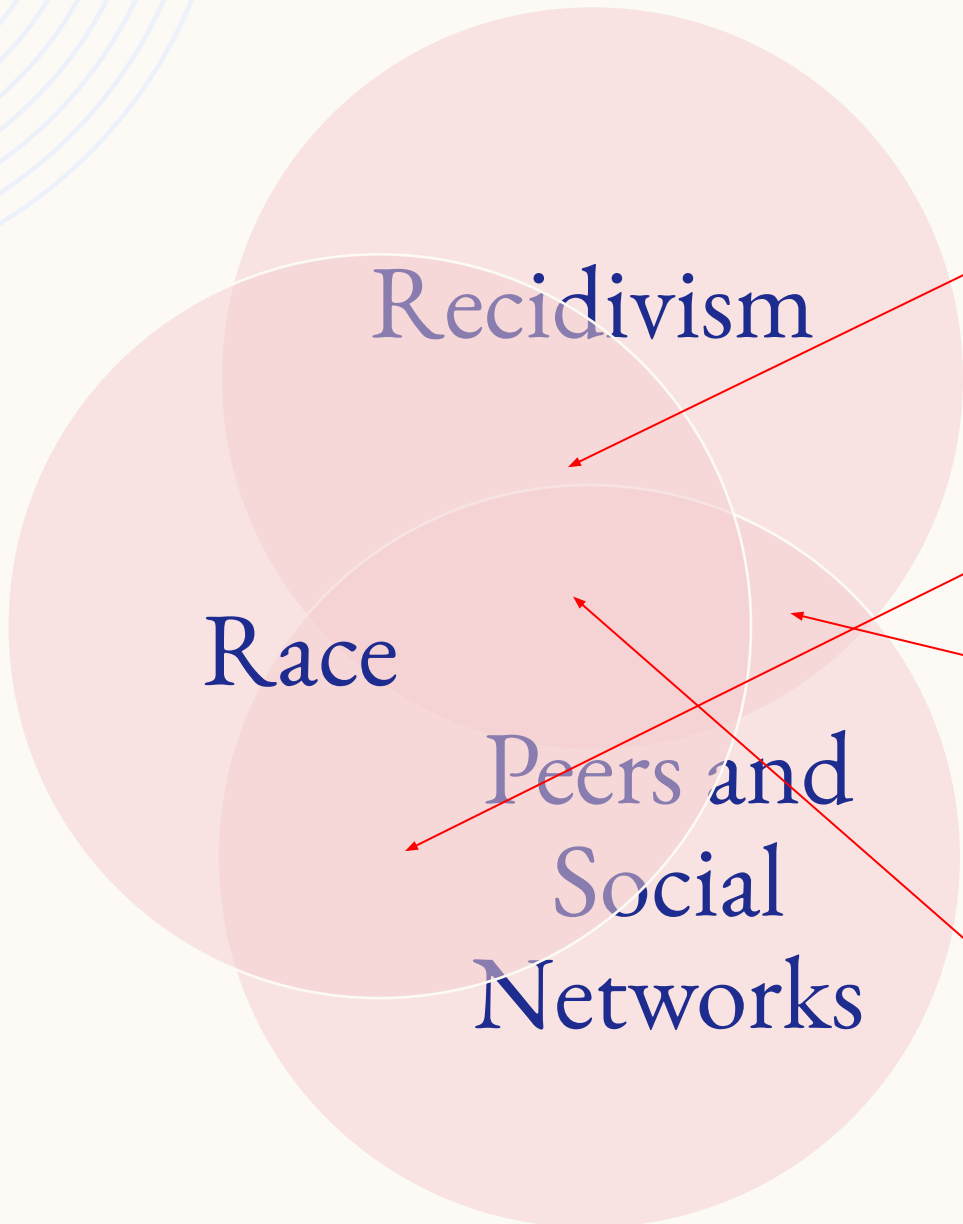


(Butcher & Kretschmar, 2019)



**COULD THESE  
FACTORS BE  
PROXIES?**





Variability in recidivism is largely explained by race

Variability in Peers and Social Networks is also explained by race

The shared variability in Peers and Social Networks and Recidivism exists but amounts to very little overall

Ultimately the variability in recidivism explained by race is explained by the variability in Peers and Social Networks that is also explained by race.

# 1.C DO THE ALGORITHMS WORK EQUALLY WELL FOR ALL RACES?

## Predictive equity:

- The tool is equally accurate in its classification of different racial & ethnic groups.

## Minimized impact on disparities:

- On average, different groups are similar in terms of risk scores, categories & underlying factors.

# MIS-CLASSIFICATION

Moderate



Low Risk



High Risk



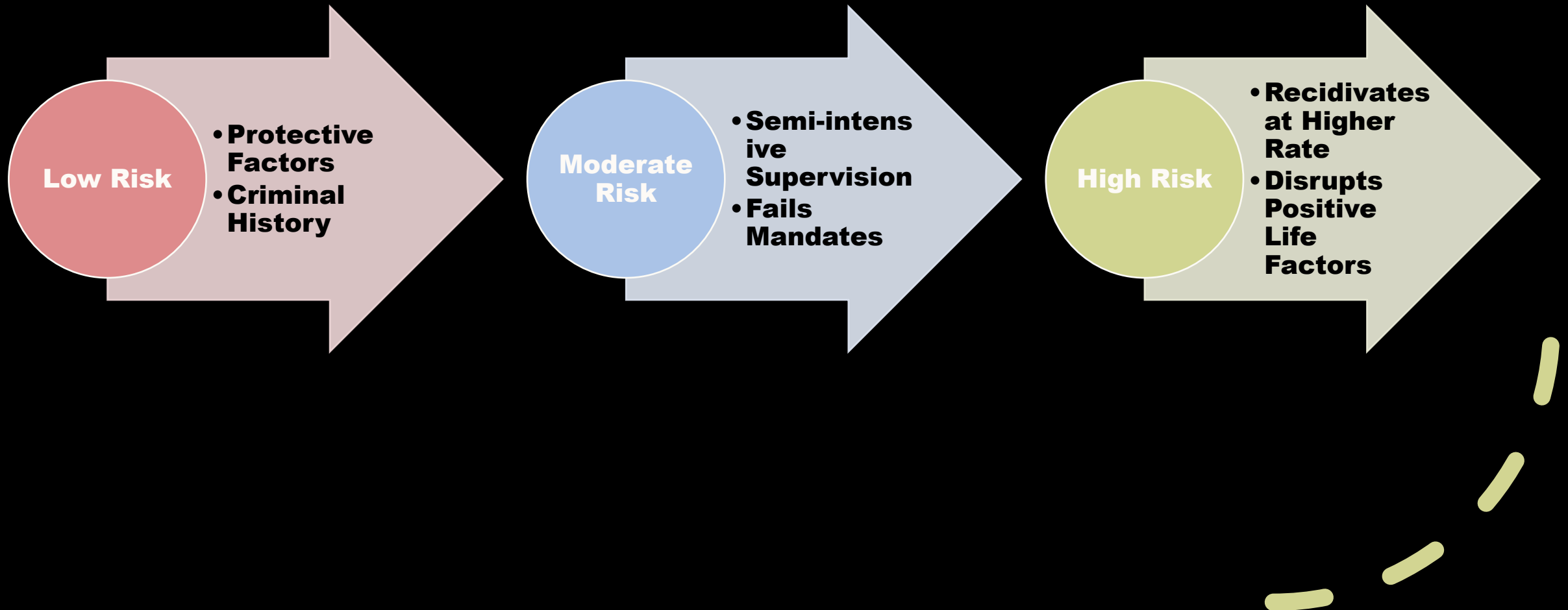


# SELF-FULLING PROPHECY

## Mis-classification is difficult to show empirically

- Misclassified individuals are placed in programs according to their classification
    - Results in higher risk for recidivism
      - Programming that is inappropriate for their level of risk and needs
      - Failure affirms they are higher risk
-

# RISK TRAJECTORY





# **ARE RACE AND RISK INEXTRICABLY INTERTWINED?**

Can you measure one without measuring the other?

# OHIO YOUTH ASSESSMENT SYSTEM: A CLOSER LOOK AT THE RESEARCH

RNR tool designed to measure risk for recidivism

- Intended to inform decision-making around treatment and intervention

5 separate tools

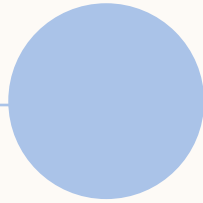
- Diversion, Disposition, Detention, Residential, Reentry
  - Disposition is most widely used and studied

Disposition tool consists of 7 subscales

- Juvenile justice history
  - Family and living arrangements
  - Peers and social support network
  - Education and employment
  - Pro-social skills
  - Substance abuse/ mental health
  - Values beliefs and attitudes
- 7 scales summed up to create total score which is then converted to (Low, Moderate, High)

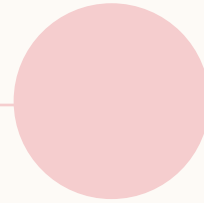
Used in several states across the US including Ohio, Illinois, and Arizona

# RECENT WORK ON THE OYAS



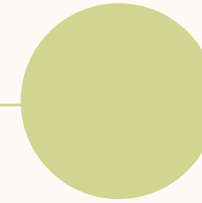
## MILLER ET AL. (2021)

- Criminal History items predicted recidivism in White boys but nobody else
- Remove Criminal History items?



## SULLIVAN ET AL. (2022)

- Confirmatory factor analysis
- Conceptualization of the OYAS as a total score maybe problematic
- Subscales may not be comparable across racial groups



## MILLER ET AL. (2023)

- Item response theory
- Pro-social items had low difficulty
- May be characteristic of JJI youth and doesn't discriminate criminogenic risk



# DOES THE TOTAL SCORE PREDICT RECIDIVISM?

McCafferty (2018) study of youth from 33 counties in Ohio

Type of Recidivism	White	Black
New Arrest	0.634	0.637
Technical Violation	0.692	0.691
Any Recidivism	0.682	0.689

AUC Values by Race

# MCCAFFERTY (2018)

## RECIDIVISM RATES BY RACE

New Arrest	White	Black
Low	24%	31%
Moderate	41%	48%
High	47%	59%

Technical Violation	White	Black
Low	11%	10%
Moderate	31%	26%
High	27%	42%

Any Recidivism	White	Black
Low	30%	39%
Moderate	59%	64%
High	64%	81%

### Two observations

- OYAS is discriminating between Low, Moderate, and High categories fairly well
- Recidivism rates are higher for Black youths in nearly every category

### NOTE

- If treatment decisions are based on risk, and overprogramming can increase your risk, it is not surprising that recidivism rates increase with risk level.

# IS THE STORY OVER?

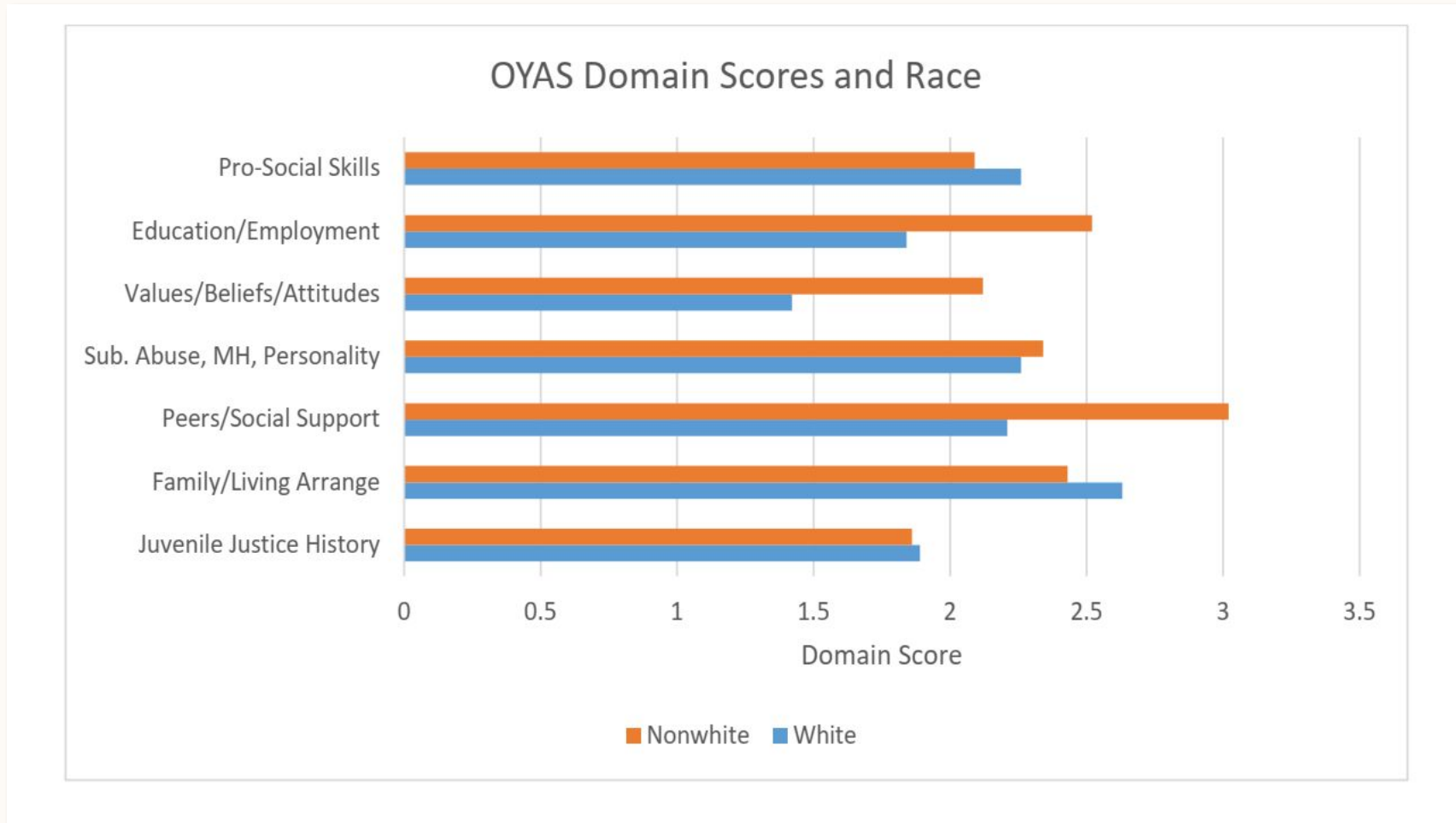
OYAS by Race

OYAS categories	Race			Total
	black	other	white	
low	355	44	131	530
	67 %	8.3 %	24.7 %	100 %
	49.6 %	61.1 %	61.5 %	52.9 %
moderate	273	25	69	367
	74.4 %	6.8 %	18.8 %	100 %
	38.1 %	34.7 %	32.4 %	36.7 %
high	88	3	13	104
	84.6 %	2.9 %	12.5 %	100 %
	12.3 %	4.2 %	6.1 %	10.4 %
Total	716	72	213	1001
	71.5 %	7.2 %	21.3 %	100 %
	100 %	100 %	100 %	100 %

$\chi^2=15.875 \cdot df=4 \cdot \text{Cramer's } V=0.089 \cdot p=0.003$

A larger proportion of Black youths are classified as high risk

# OYAS AND RACE



(Butcher & Kretschmar, 2019)

# STATE OF THE RESEARCH



## PREDICTIVE ACCURACY

- Some evidence for accuracy across racial groups
- Fairly problematic



## DISPARITY IN CATEGORIES

- Black males are more frequently categorized as high risk



## DISPARITY IN SUBSCALES

- Subscales may not be consistent across race



## DISPARITY IN ITEMS

- Items are not endorsed at the same rate and may not indicate risk in the same way



## CRIMINAL HISTORY

- Criminal history does not predict recidivism risk across racial groups

# WHERE DOES RESEARCH ON RNR TOOLS GO FROM HERE?

Examine how removing static factors such as criminal history will change the instrument

Examine whether factor structures hold across race

- If not, examine whether and how a tool should be conceptualized and scored differently by race

Examine item level differences across race

- Are there items that are endorsed more for BIPOC involved in the justice system?
  - Do these items measure risk or are they simply inflating the score in BIPOC?

# SUBSCALES IN C-CAT(M)

APA definition of subscale "a scale that taps some specific constituent or otherwise differentiated category of information as part of a larger, overall scheme"


- In the C-CAT, the objective is to measure criminogenic risk. Individual questions are grouped along subscales that each contribute to the measurement of risk.

- Employment
- Education
- Housing
- Social and Familial Networks
- Personal Relationships
- Attitudes towards Crime and Violence
- Impulsivity
- Substance Use
- Mental Health
- Trauma

# **FUTURE RESEARCH ON THE C-CAT**

- Focus on
  - Properties of items and scales
  - How the items and scales may be different for subpopulations (race, gender, etc.)
  - Validation for use in treatment courts
  - Move towards conceptualizing recidivism differently





**BECAUSE AN INSTRUMENT  
PREDICTS WELL IN THE  
AGGREGATE DOES NOT MEAN IT  
PREDICTS RISK WITH EVERY  
SUBPOPULATION**

VanBenschoten, 2008

# A NOTE ON OBJECTIVITY

- Important to remember that objectivity and subjectivity lie on a continuum
- A tool developed using sound theory and science is only as good as the measure it is trying to predict
  - Decisions to arrest, to charge, etc. are inherently subjective

# VALIDATION IS A PROCESS

- Research should continuously seek to validate and revalidate tools
  - Validated for whom?
    - A validated tool may not be appropriate for your specific population.
- Predictive validity should be just part of larger story about the psychometric properties of a measurement tool

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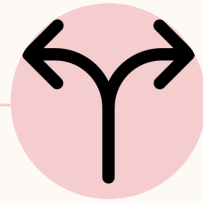
# **HOW TO ADDRESS BIAS IN POLICY AND PRACTICE**

# THREE CONSIDERATIONS



## THE TOOL

Is the tool itself perpetuating bias?



## WHERE IS THE TOOL USED

The point in the CL system the tool is used can influence the collateral consequences of bias.



## HOW IS IT BEING USED

Human use of the tool can compound biased outcomes for individuals.

**2) WHERE IS  
THE TOOL  
BEING USED?**

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Pretrial

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Diversion/Treatment

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Probation

### 3) HOW IS THE TOOL BEING USED?

#### PRETRIAL

**Using Well** – reducing pretrial use of jail

- Decrease Disparities – limits bias in decision makers and results in greater release rates for BIPOC

**Using Poorly** – net widening, increasing number of people on pretrial supervision

- Increases Disparities – BIPOC are more likely to have overly-intensive mandates that are disruptive to lives and increase likelihood of pretrial failure

### 3) HOW IS THE TOOL BEING USED?

#### DIVERSION

**Using Well** – Increasing positive outcomes for growth, recovery, employment, and wellness

- Decrease Disparities – works to reduce recidivism factors by supporting needs and connection to services

**Using Poorly** – Placed individuals in overly intensive programming that disrupts positive life outcomes

- Increase Disparities – if in overly intensive treatment increases likelihood of failure and risk



### 3) HOW IS THE TOOL BEING USED?

#### PROBATION

- **Using Well** – Appropriately tailoring supervision and supportive services
  - Improve Outcomes – increase community safety *and* connect individuals to meaningful supportive services for successful reentry
- **Using Poorly** – Being assigned overly intensive supervision and mandates that are more likely to result in failure
  - Increase Disparities – can result in higher rates of revocations for BIPOC which increases risk



# **HOW TO IMPROVE OUTCOMES FOR BIPOC?**

Creating Positive Outcomes With Risk  
Assessment



# MITIGATING RACIAL BIAS

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1

Mitigate racial bias in  
the tools

2

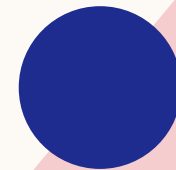
Mitigate racial bias in  
the process

3

Mitigate racial bias in  
the people

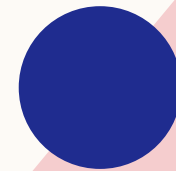
# MITIGATE BIAS IN THE TOOLS

1. Different scoring thresholds by race
2. Make sure the tool is equally accurate for all racial groups
3. Make sure you consider false positives and over-classification for BIPOC
4. Consider using other metrics such as treatment success



# MITIGATING BIAS IN THE PROCESS

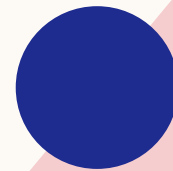
1. Make sure the tools are being used in the ways they are intended!
2. Research the outcomes to identify if there are disparities for BIPOC in bail, pretrial release, program diversion, and probation revocation.
3. Collect and review disparity outcomes for each phase of your program.
4. If disparities are present try to identify why and change court practices or procedures.



# CREATE GUIDELINES

## Examples:

- Bail Setting Guidelines
- Sentencing Guidelines
- Death Penalty Guidelines



# MITIGATING BIAS IN THE PEOPLE

1. Be aware of your personal bias.
2. Track and review all overrides for disparities.
3. Racial bias trainings for judges, prosecutors, public defenders, and correction officers.
4. Consider the totality of a person's circumstances.
5. Question the impacts of your decisions.

# SUMMARY

1. All current risk tools have racial bias.
2. Risk assessment tools have been found to have both positive and harmful outcomes for BIPOC.
3. Careful construction and implementation of tools is essential to ensure that tools are resulting in positive and *not negative* results for BIPOC.
4. Research into reducing racial disparity in RNR tools is in early stages.
5. Research can only do so much to fix disparity in RNR tools. It is important that policy and practice play a significant role.



One cannot expect any risk assessment tool to reverse centuries of racial injustice or gender inequality. That bar is far too high. But, one can hope to do better.

-Berk et al., 2021

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A decorative graphic on the right side of the slide consists of several overlapping circles. The top-right circle is light pink and contains the number '65'. Below it is a larger red circle. To the left of the red circle is a green circle. In the bottom-left corner, there is a solid blue circle. The background of the slide is white.

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