

# **The Predictive Validity of Static-99R Over 10 Years for Sexual Offenders in California: 2018 Update**

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# Purpose

## □ Updated the 2014 study (Hanson et al., 2014)

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### The Field Validity of Static-99/R Sex Offender Risk Assessment Tool in California

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Policies that differentially apply to sexual offenders at different risk levels require defensible procedures for classifying offenders into risk categories. The current study examines the reliability and validity of Static-99 and Static-99R sexual offender risk assessment tools as implemented in the State of California. California is a valuable case study because it is a large jurisdiction that has devoted considerable resources to the implementation of risk tools. In Study 1, 55 corrections and probation officers scored Static-99R for 14 common cases. Overall, rater reliability was acceptable (intraclass correlation [ICC] = .78), with higher reliability found for experienced scorers (ICC = .85) than less experienced scorers (ICC = .71). In the second study, the predictive ability of Static-99 and Static-99R was examined in a prospective study of 475 randomly selected adult males released in 2006–2007 and followed for 5 years. Static-99/R scores were strongly related to subsequent sexual recidivism (areas under the curve  $\geq .80$ ). As well, there was acceptable fit between the expected and observed recidivism rates. These results suggest that it is possible to implement empirically derived risk assessment tools in large jurisdictions without degrading predictive accuracy.

*Keywords:* sexual offenders, risk assessment, Static-99R, field validity

- $N = 475$
- Paroled sex offenders
- Static-99R
- 5-year follow-up period

# Hanson et al. (2014)

- ✓ Good discrimination
  - AUCs of .75 to .86; White, Black, Hispanic
- ✓ Good calibration
  - $E/O = 1.30$  [0.87, 1.96]

# What is the New?

## 1) Additional Information of

- Death
- Deportation
- Sex offender registry

## 2) New Standardized Risk Categories

- I, II, III, IVa, and IVb

## 3) 10-year follow-up period

# Current Study

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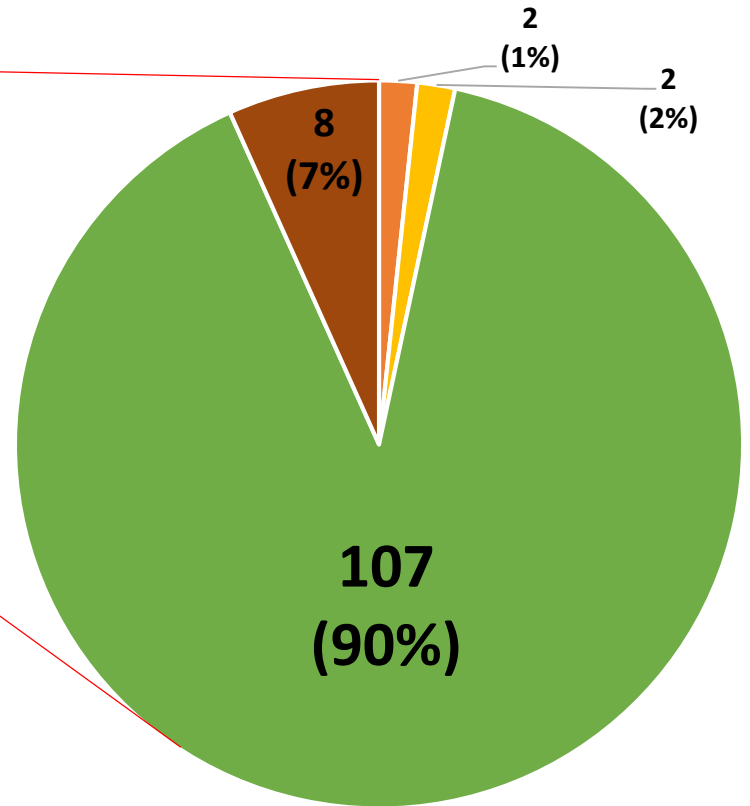
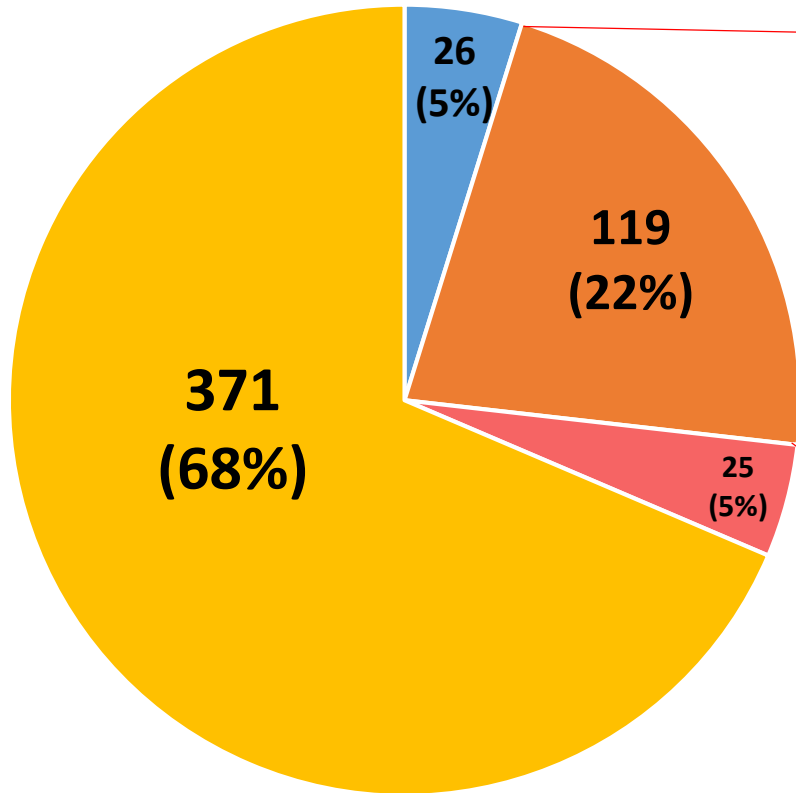
	Information of (Death, Deportation, Sex offender registry)	New Risk Categories	Follow-up period
<b>PART I</b>	YES	YES	5 years
<b>PART II</b>	YES	YES	10 years

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# PART I

Total Sample (N = 541)

Deportees (n = 119)



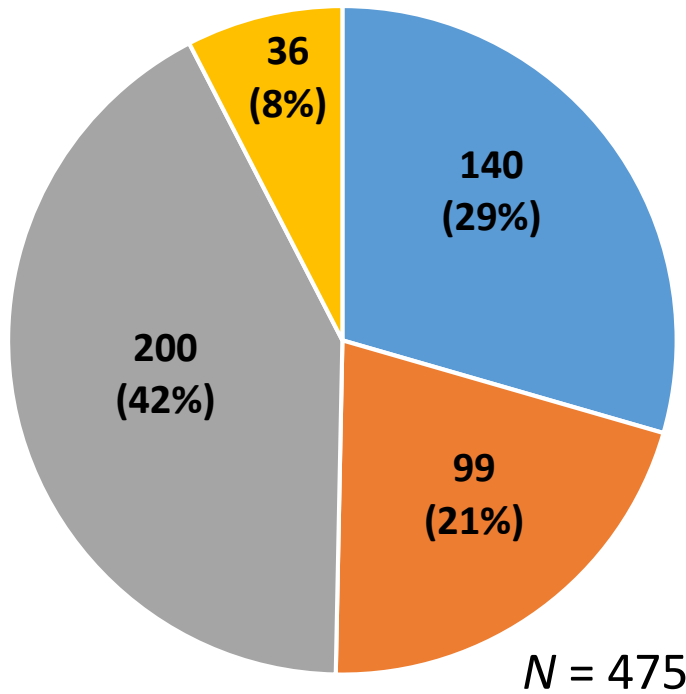
■ Death   ■ Deported   ■ Terminated   ■ PART I Sample

■ White   ■ Black   ■ Hispanic   ■ Other

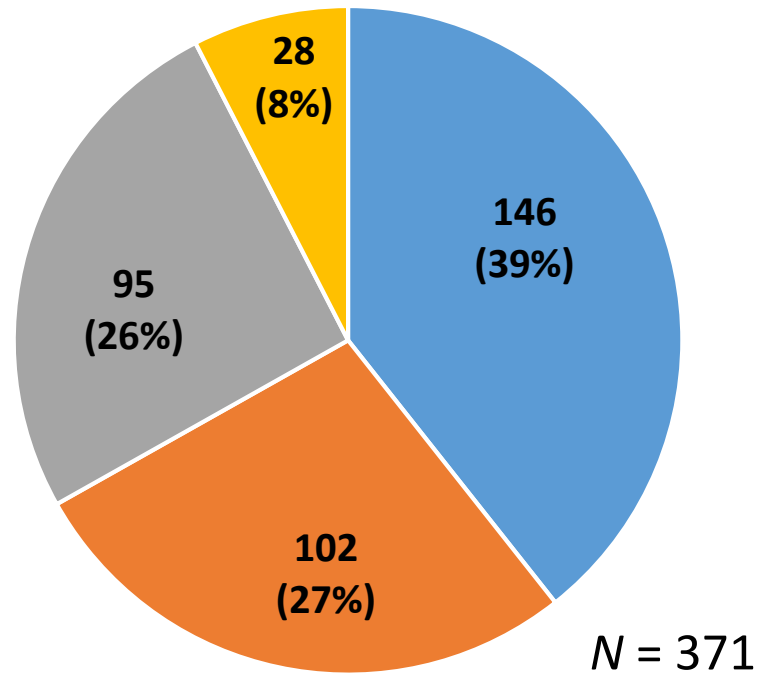
# PART I

## Racial Distribution

Hanson et al. (2014)



Current Study

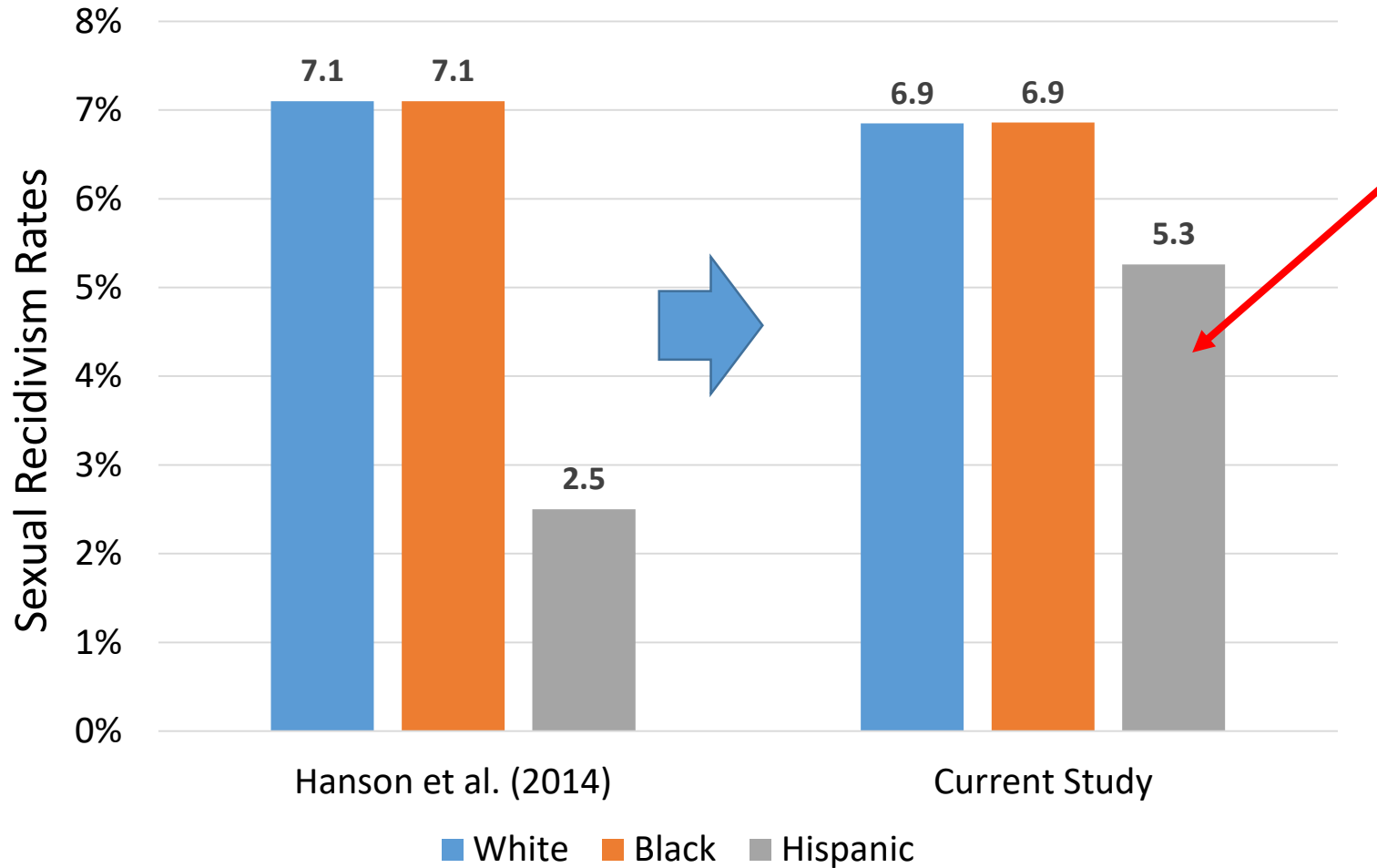


■ White ■ Black ■ Hispanic ■ Other/Unknown

■ White ■ Black ■ Hispanic ■ Other/Unknown

# PART I

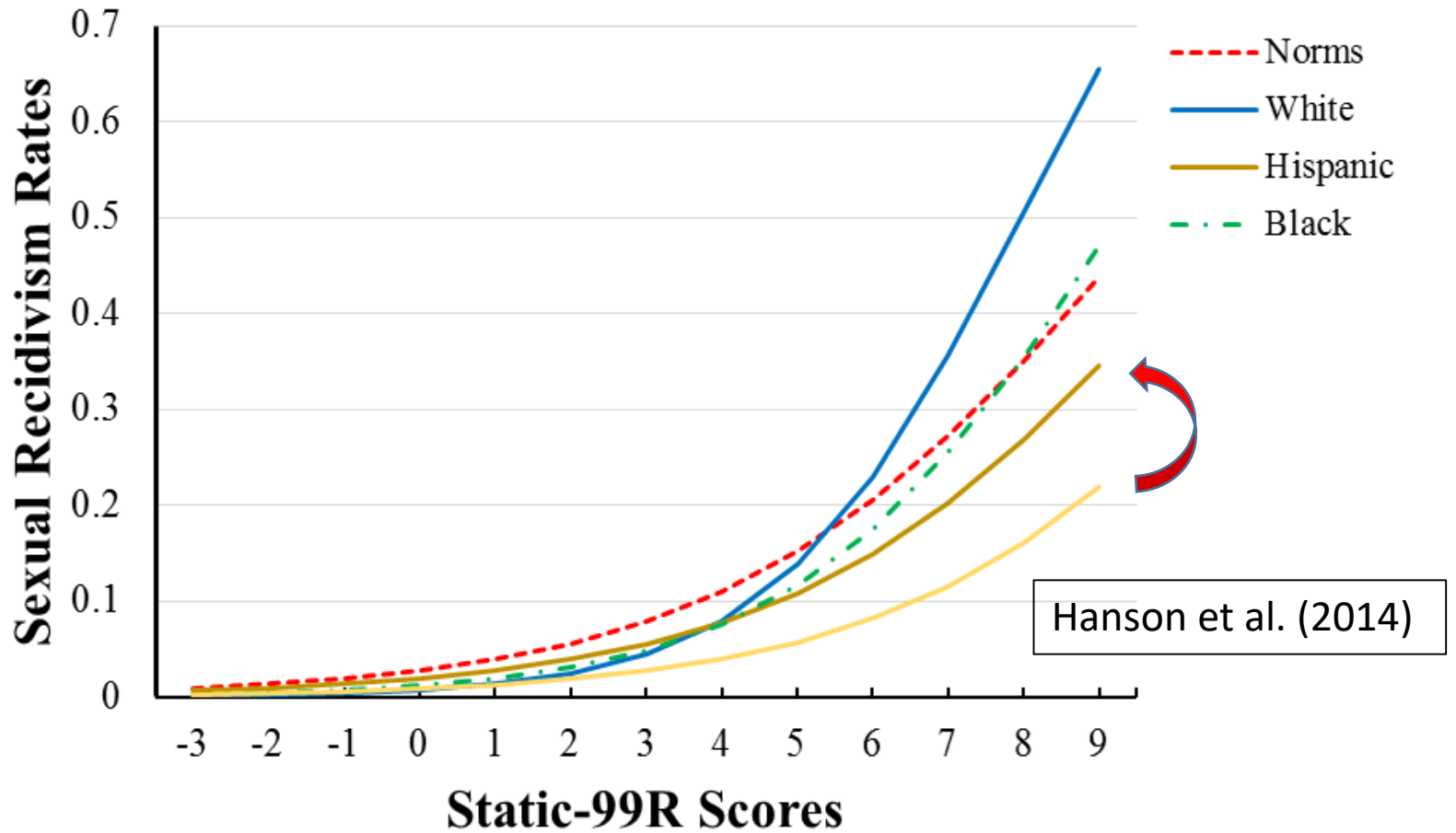
Fixed 5-year follow-up period





# PART I

Fixed 5-year follow-up period



# PART I

## Conclusion

- ✓ Good discrimination
  - AUCs of .72 to .85; White, Black, Hispanic
  
- ✓ Good calibration
  - $E/O = 1.34 [0.89, 2.01]$
  - Sexual recidivism rates for Hispanic sex offender became comparable with the sexual recidivism rates for White and Black ethnic groups, as well as the norms of Static-99R.

# PART II

- $N = 338$
- Fixed 10-year Follow-up Period

Racial groups	Sexual recidivism rates (%)	Number of Recidivists/Total	Static-99R
			<i>M (SD)</i>
White	10.6	14/132	2.42 (2.38)
Black	10.8	10/93	2.85 (2.15)
Hispanic	11.8	10/85	2.11 (2.24)
Total	10.4	35/338	2.43 (2.25)

- ✓ Similar sexual recidivism rates across the ethnic groups
- ✓ Black sex offenders had the highest Static-99R score and Hispanic sex offenders had the lowest score.
  - BUT, there were no significant differences.

# Offense-Free Effect

## Sexual Recidivism Rates

	5-year follow-up period (PART I)	10-year follow-up period (PART II)
White	6.85% (10/146)	10.6% (14/132)
Black	6.86% (7/102)	10.8% (10/93)
Hispanic	5.26% (5/95)	11.8% (10/85)
Overall	6.20% (23/371)	10.4% (35/338)

- ✓ The sexual recidivism rate halves every-5-year offense-free in the community (Hanson et al., 2018).
- ✓ Offense-free effect in this California sample
  - 6.20% (23/371) vs. 3.80 % (12/315)  
0-5 Year                      5-10 Year

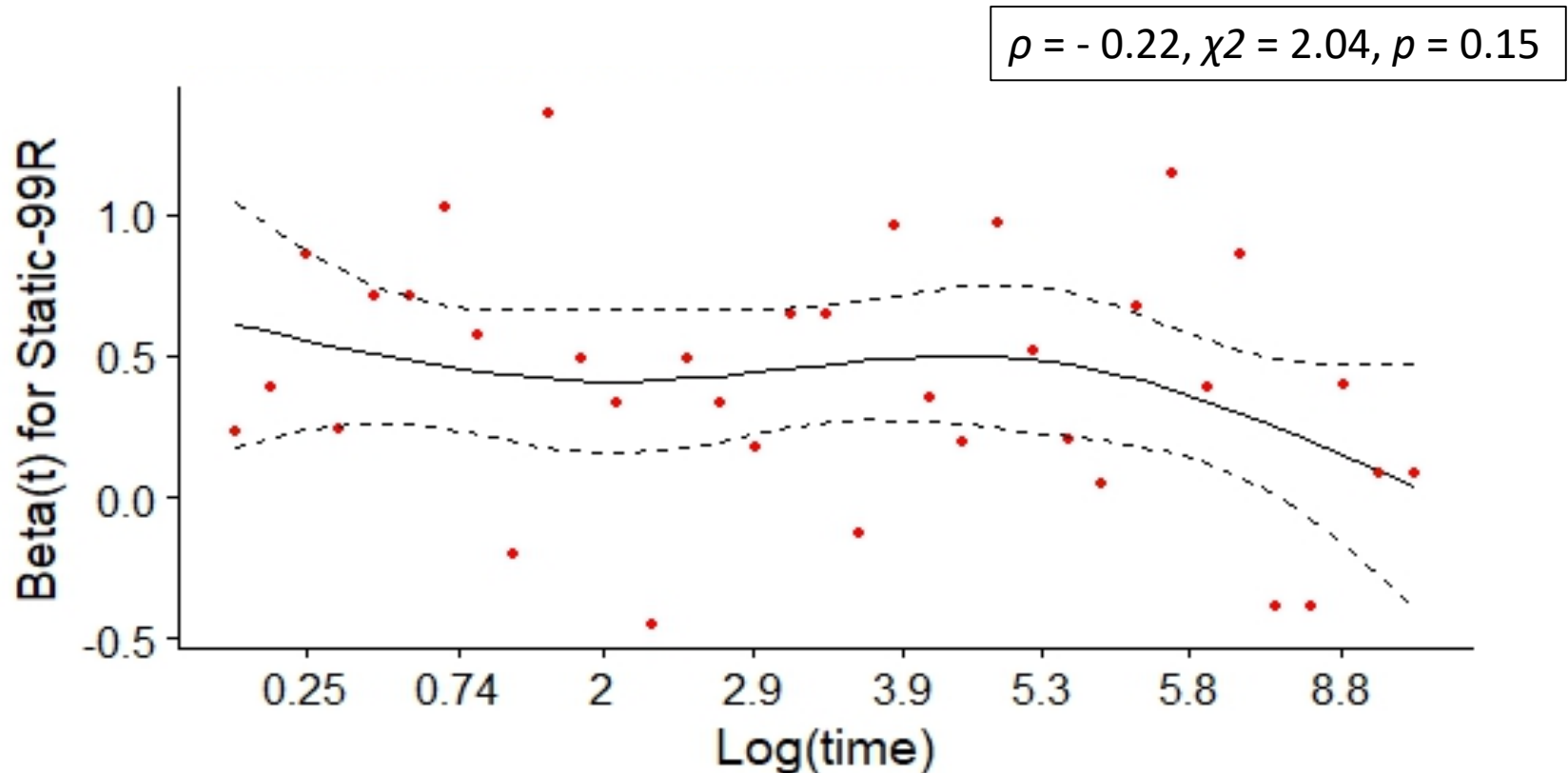
# PART II

## AUC

	5-year follow-up period (PART I)	10-year follow-up period (PART II)
White	<b>.852 [.724, .980]</b>	<b>.849 [.736, .961]</b>
Black	<b>.755 [.549, .961]</b>	.628 [.421, .836]
Hispanic	.723 [.431, .999]	.696 [.478, .914]
Overall	<b>.806 [.701, .911]</b>	<b>.751 [.651, .850]</b>

- ✓ Good discrimination for White and Hispanic groups was consistent with time.
- ✓ Lower AUC for Black with a 10-year follow-up period

Discrimination for full sample declines slightly over time  
(non-significant)



Scatter plot of scaled Schoenfeld residuals from Cox regression model

# California 10-year rates are similar to those found in other routine samples

Settings	Sexual Recidivism Rate (% , <i>n/N</i> )		Base rate (Static-99R score of 2)	
			<i>B02</i>	95% C.I.
<b>Canada</b> (Boer, 2003)	7.80	(23/295)	3.81%	[1.92%, 7.40%]
<b>North Dakota</b> (Epperson, 2003)	22.2	(8/36)	2.53%	[0.13%, 34.3%]
<b>Sweden</b> (Långström, 2004)	7.37	(26/353)	4.83%	[2.85%, 8.08%]
<b>New Jersey</b> (Mercado et al., 2011)	9.01	(10/111)	6.12%	[2.43%, 14.6%]
<b>California</b> (Current Study)	9.17	(31/338)	6.07%	[3.76%, 9.62%]
<i>Q</i> (df = 4)			1.77, <i>p</i> = .777	
<i>I</i> <sup>2</sup>			.00	
Average (fixed-effect)			5.12%	[3.81%, 6.84%]

# PART II

## Conclusion

- ✓ Overall good discrimination
  - Lower for Blacks (AUC and Harrell's C of .63)
    - Meaningful? or Chance variation due to small sample?
  
- ✓ No calibration analysis for Static-99R risk levels
  - BUT, overall 10-year sexual recidivism rates in this California sample were comparable to the rates observed in other jurisdictions.



# Overall Conclusion

- ✓ Support the continued use of Static-99R in California for 5- and 10-year risk assessments.
- ✓ Consider the time they have been sex offense-free in the community in the overall evaluation of risk.

# Thank you

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