

UHD
University of Houston-Downtown.
College of Public Service

Women's Risk/Needs Assessment

Norming and Validation for the
Oregon Department of Corrections

Krista S. Gehring, Ph.D.
Professor of Criminal Justice
University of Houston-Downtown

1

Introduction

- Over the past several decades, women have been entering into the criminal justice system at greater rates than their male counterparts.
- This influx of women has impacted correctional agencies in numerous ways and has caused many organizations to explore approaches to better serve this population.
- A gender-responsive approach acknowledges the unique needs and strengths of justice-involved women that can be addressed with interventions to reduce risk and improve many criminal justice outcomes.

2

Women's Risk Needs Assessment (WRNA)

- The WRNA is a gender-responsive assessment created through a cooperative agreement between the National Institute of Corrections and the University of Cincinnati.
- It includes both gender-responsive and gender-neutral scales and can be used as a 'stand alone' dynamic risk needs assessment.

3

WRNA Domains

- The WRNA interview consists of gender-neutral and gender-responsive risk factors as well as gender-responsive strengths.
- There are 20 individual risk/needs scales and 5 strengths scales in the Probation WRNA
- Not every scale is used to determine risk level.

4

Norming an Assessment

- Norming:
 - Norming helps ensure that the assessment tool is fair, accurate, and applicable to the specific population it is intended to serve.
- It involves:
 - Collecting data
 - Analyzing data
 - Establishing benchmarks
 - Validation

This process is crucial for making informed decisions based on the assessment results.

5

Validating an Assessment

- Validating:
 - Ensuring that the instrument accurately measures what it is intended to measure and that it is reliable across different populations and settings.
 - Is it related to outcomes and predictive?
- It involves:
 - Data collection
 - Statistical analyses: typically Pearson's r ; Receiver Operating Characteristic and the Area Under the Curve (AUC)

6

Current Study

- Norm and validate the WRNA on populations of justice-involved women in Oregon
- Since it's implementation, the WRNA had not been normed/validated

7

Methodology

- De-identified data for the WRNA's (November 2015 to December 2020)
 - Individual items (i.e., answers to each question on the assessment),
 - Domain scores (i.e., individual risk/needs scales and strength scales)
 - Total scores for individuals on probation or post-prison supervision
- De-identified recidivism data comprised of new arrests, convictions, and incarcerations for up to three-year follow up period

8

Samples

- Probation: 6,016 individuals on probation from November 15, 2015, to December 31, 2020
- Post-Prison: 3,422 individuals on post-prison supervision from November 19, 2015, to December 31, 2020
- Largest samples in any WRNA research ever
- First time validation of a post-prison/parole sample

9

Risk Levels

WRNA Risk Level	Probation (N = 6,016)		Post-Prison (N = 3,422)	
	Frequency	Percentage	Frequency	Percentage
Low	713	11.9	166	4.9
Moderate	1,867	31.0	755	22.1
Medium	2,807	46.7	1,895	55.4
High	629	10.5	606	17.7
Total	6,016	100.0	3,422	100.0

10

Data Analyses

- Norming
 - Chi-square analyses
- Validation
 - Correlations (Pearson's r)
 - Receiver Operating Characteristic and Area Under the Curve (with confidence intervals)

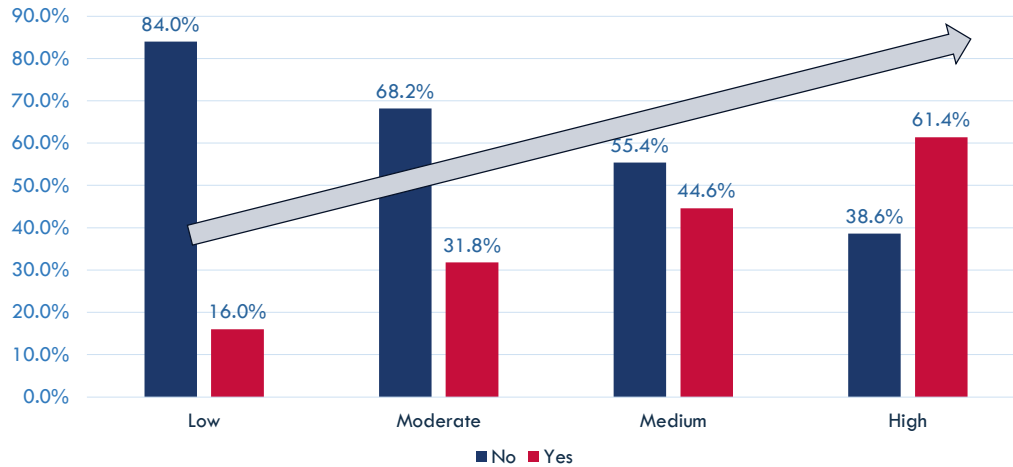
11

Probation Norming Results



12

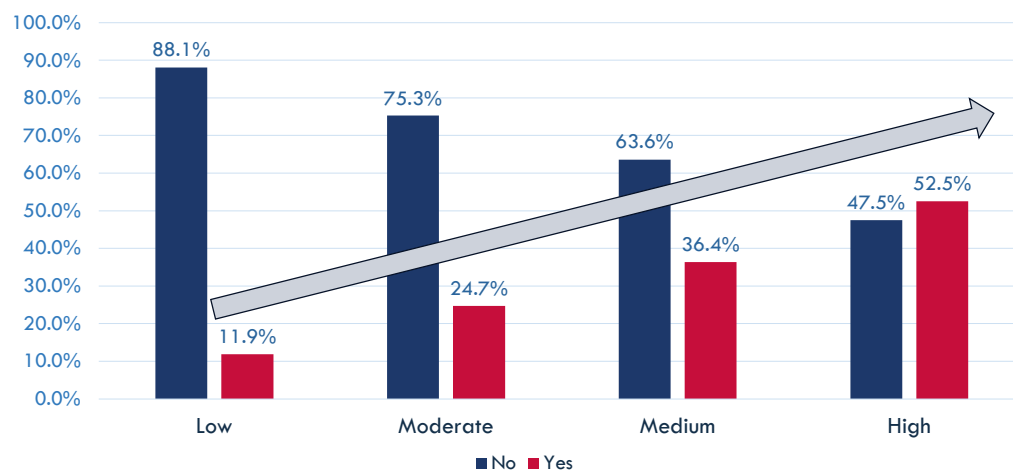
Norming: 3 Year Arrests



Overall, 39.0% recidivism rate (3-year arrests)

13

Norming: 3 Year Convictions



Overall, 31.5% recidivism rate (3-year convictions)

14

Probation Validation Results



15

Bivariate Correlations and AUCs for Individual Risk/Need Scales

3 Year Convictions	
Scale	<i>r</i>
Antisocial Attitudes	.05***
Criminal History ☆	.12***
Educational Needs	.03*
Employment/Financial ☆	.19***
Housing Safety ☆	.12***
Antisocial Friends ☆	.21***
Anger/Hostility ☆	.06***
Hx of Mental Illness	
Symp Depression/Anxiety ☆	.11***

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

16

Bivariate Correlations and AUCs for Individual Risk/Need Scales

3 Year Convictions	
Scale	<i>r</i>
Symptoms of Psychosis	.06***
Abuse as a Child ☆	
Abuse as an Adult ☆	.04**
Physical Abuse	.04***
Sexual Abuse	
PTSD	.09***
Hx of Substance Abuse ☆	.13***
Current Substance Abuse ☆	.24***

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

17

Bivariate Correlations and AUCs for Individual Risk/Need Scales

3 Year Convictions	
Scale	<i>r</i>
Family Conflict	.11***
Relation Diff w/ Significant Other	.09***
Parental Stress (3,333) ☆	.13***

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

18

Bivariate Correlations and AUCs for Individual Risk/Need Scales

3 Year Convictions	
Scale	<i>r</i>
Educational Strengths ☆	-.04***
Family Support ☆	-.08***
Relationship Stability	-.05***
Parental Involvement (3,333)	-.15***
Self-Efficacy ☆	-.11***

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

19

Bivariate Correlation and AUC for Total WRNA Score

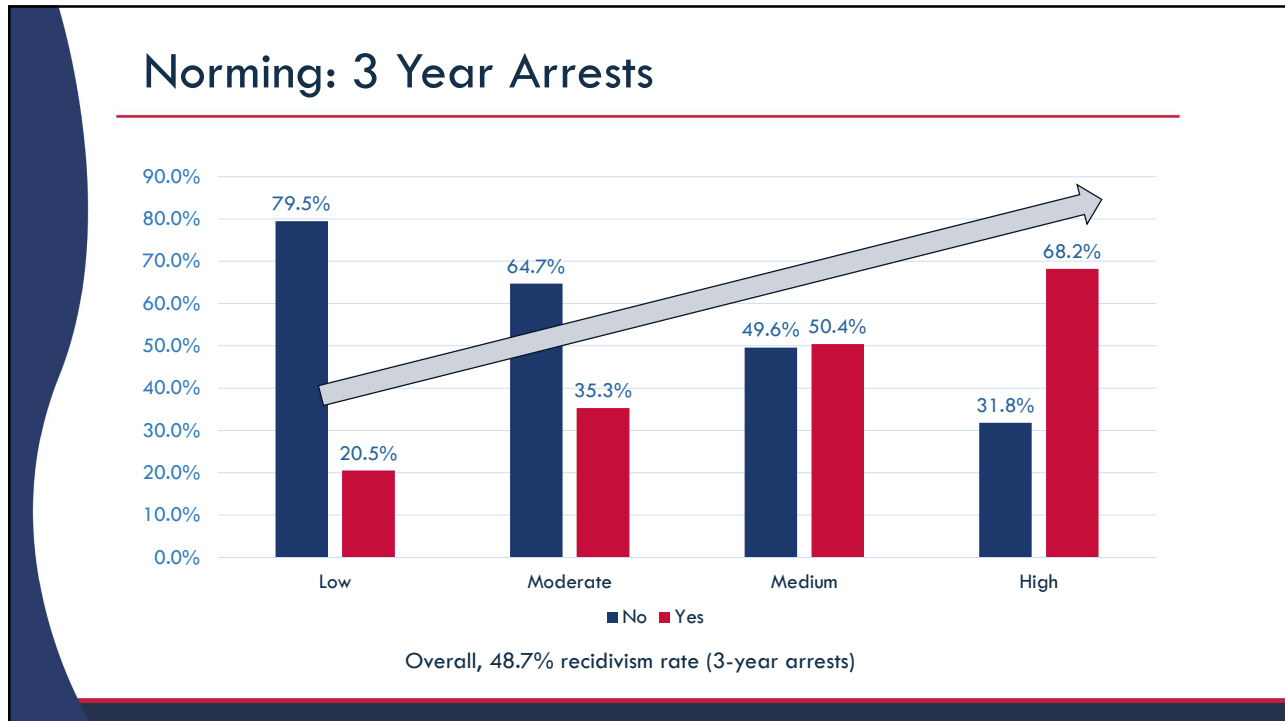
	Convictions		
	<i>r</i>	AUC	95% CI
Total WRNA Score (1Y)	.22***	.66***	.64-.68
Total WRNA Score (2Y)	.24***	.65***	.64-.67
Total WRNA Score (3Y)	.25***	.65***	.64-.67

Note: *r* = Pearson's correlation coefficient; AUC = area under the curve; CI = confidence interval.
* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

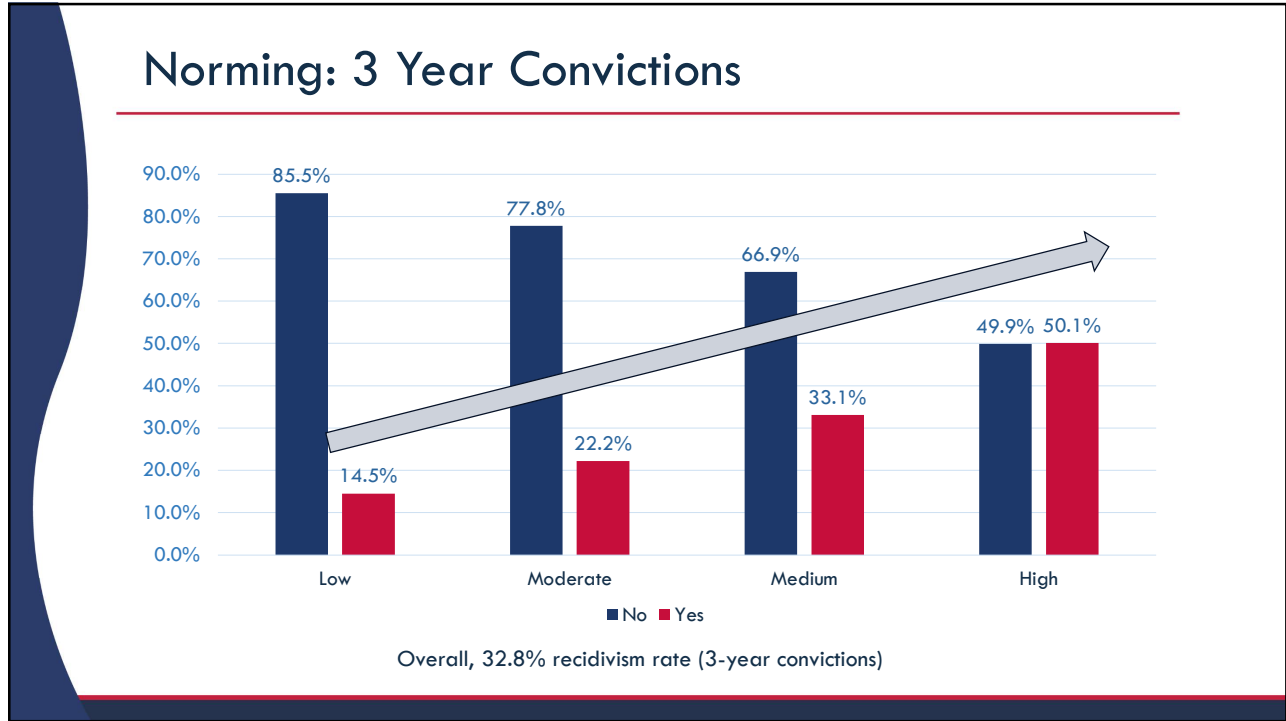
20



21



22



23



24

Bivariate Correlations and AUCs for Individual Risk/Need Scales

3 Year Convictions	
Scale	<i>r</i>
Antisocial Attitudes	.06***
Criminal History ☆	.12***
Educational Needs	.04**
Employment/Financial ☆	.16***
Housing Safety ☆	.12***
Antisocial Friends ☆	.16***
Anger/Hostility ☆	.11***
Hx of Mental Illness	.04*
Symp Depression/Anxiety ☆	.13***

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

25

Bivariate Correlations and AUCs for Individual Risk/Need Scales

3 Year Convictions	
Scale	<i>r</i>
Symptoms of Psychosis	.04*
Abuse as a Child ☆	
Abuse as an Adult ☆	
Physical Abuse	
Sexual Abuse	
PTSD	.08***
Hx of Substance Abuse ☆	.07***
Current Substance Abuse ☆	.23***

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

26

Bivariate Correlations and AUCs for Individual Risk/Need Scales

3 Year Convictions	
Scale	<i>r</i>
Family Conflict	.11***
Relation Diff w/ Significant Other	.08***
Parental Stress (1,987)☆	.18***

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

27

Bivariate Correlations and AUCs for Individual Risk/Need Scales

3 Year Convictions	
Scale	<i>r</i>
Educational Strengths ☆	-.07***
Family Support☆	-.05***
Relationship Stability	
Parental Involvement (1,987)	-.10***
Self-Efficacy☆	-.15***

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

28

Bivariate Correlation and AUC for Total WRNA Score

	Convictions		
	<i>r</i>	AUC	95% CI
Total WRNA Score (1Y)	.20***	.65***	.63-.68
Total WRNA Score (2Y)	.23***	.65***	.63-.67
Total WRNA Score (3Y)	.23***	.64***	.62-.66

Note: *r* = Pearson's correlation coefficient; AUC = area under the curve; CI = confidence interval.
* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

29

Conclusion

- Norming and validation of the WRNA for the samples of women on probation and post-prison supervision in Oregon produced results that suggest **this assessment tool is accurate and predictive for these populations.**
- The findings of the **norming process** indicate the WRNA is categorizing individuals correctly in both probation and post-prison settings; that is, low risk individuals had the lowest rate of recidivism, and as the risk level increased, the recidivism rate for the risk-level groups increased as well.

30

Conclusion

- **Validation** of the **individual scales** provided information regarding which domains were correlated with the offense-related measures for the three follow up periods (12-, 24-, 36-months).
 - Most of the individual risk/needs scales were related to recidivism for both samples; however, there were some notable exceptions.
 - For instance, in both samples, the **abuse scales** (child abuse, adult abuse, physical abuse, sexual abuse) **were generally not related to recidivism**.

31

Conclusion

- **Validation** of the **total WRNA risk score** indicated that the WRNA is predictive of arrests, convictions, and incarcerations for both the probation and post-prison samples for all follow-up periods.
- Correlations between the total WRNA score and each recidivism measure are statistically significant for every follow up period.
 - These results are similar to previous WRNA validation and revalidation research (Van Voorhis, Salisbury, Wright, Bauman, 2008; Van Voorhis et al., 2013).
- The Area Under the Curve (AUC) for each outcome is in the “fair” to “good” range (Rice & Harris, 2005) for the recidivism measures.

32

UHD
University of Houston-Downtown.
College of Public Service

Thank You!

Krista S. Gehring
Email: gehringk@uhd.edu