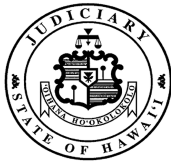


Interagency Council on Intermediate Sanctions



HAWAII STATE
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Hawaii State Validation Report on the STATIC-99 and STABLE-2000 Sex Offender Risk Assessments

Introduction

This report presents an analysis of STATIC-99 and STABLE-2000 sex offender risk assessment data for Fiscal Years 2004-2007. It is a companion report that supplements a recently published descriptive study of sex offenders in Hawaii.¹ The purpose of this report is to validate the individual sex offender risk instruments and the CSORL (supervision level) to the sex offender population in Hawaii.

The State of Hawaii utilizes the STATIC-99 and STABLE-2000 instruments for risk screening, classification, and case supervision purposes. Additionally, the STABLE-2000 provides a critical assessment for the case planning of high risk offenders. Both instruments are nationally-validated actuarial risk assessments used to predict sexual and violent recidivism among adult male offenders. The STATIC-99 is a ten-item static (unchangeable) scale used by criminal justice agencies to measure the risk potential for violent and sexual assault. The STABLE-2000 is a 16-item scaled instrument that measures dynamic dimensions of sexual deviancy. The factors addressed in the STABLE include possible problems associated with poor sexual self-regulation, relationship deficits, and deviant sexual preoccupations. Additionally, the Sex Offender Management Team (SOMT) has developed procedures that align sex offenders into consolidated risk priorities, or Combined Sex Offender Risk Levels (CSORL) using incremental risk ranges from both the STATIC-99 and STABLE-2000². The purpose of the CSORL is to determine community supervision levels for sex offenders. Furthermore, SOMT has developed a Sex Offender Case Planning Matrix using consolidated risk levels from the CSORL and the Level of Services Inventory Revised (LSI-R). This case planning matrix identifies specific case planning needs/requirements. The major study findings come from an analysis of 273 STATIC-99s administered to probationers from July 2004 through June 2007, and 99 STABLE-2000s administered from January 2006 through June 2007. A recidivism analysis was the primary method used to evaluate the accuracy and predictive validity of the STATIC-99 and STABLE-2000.

This study defines recidivism as new sex offense (SO) and/or non-sex offense (Non-SO) arrests over a 3-year period, which include arrests for new sex offenses, and/or other crimes; non-sex offense arrests, such as assaults of a non-sexual nature, property damage, drug offenses, etc., and probation/parole violations.

This report contains the following sub sections:

1. Demographic profile of offenders assessed with the STATIC-99, such as gender, age, ethnicity, marital status, and judicial unit;
2. Descriptive statistical analyses of primarily probationers who were administered the STATIC-99 and STABLE-2000, including frequency distributions, and cross-tabulations of selected variables;
3. STATIC-99 and STABLE-2000 recidivism analyses; and
4. Validation analyses of the STATIC-99 and STABLE-2000 instruments.

¹ *State of Hawaii, FYs 2008 and 2009 STATIC-99 and STABLE-2007 Sex Offender Risk Assessments.*

<http://www.hawaii.gov/icis>

² Unpublished Hawaii Department of Public Safety Document, *Using Validated Assessments to Guide Supervision: Partnerships for Sustainability*, Gillespie, L. & Anderson, D. September 2008.

Demographics

Table 1: Selected Demographic Characteristics of Offenders Administered the STATIC-99 and STABLE-2000

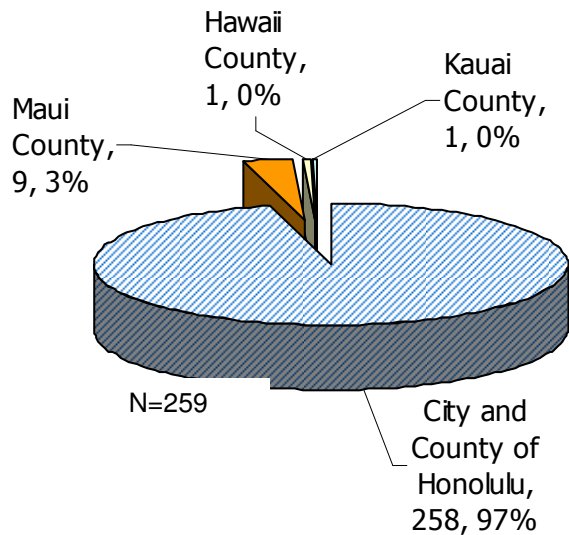
	STATIC-99		STABLE 2000	
	Frequency	Pct.	Frequency	Pct.
Gender				
Male	252	100.0%	90	100.0%
Age Range				
<20 years old	1	0.4%	-	-
20 – 29 years old	46	18.4%	20	22.2%
30 – 39 years old	46	18.4%	19	21.1%
40 – 49 years old	77	30.8%	20	22.2%
50+ years	80	32.0%	31	34.4%
Ethnicity				
Caucasian	45	17.4%	15	18.8%
Hawn/Pt. Hawn	62	24.0%	23	28.8%
Filipino	36	14.0%	16	20.0%
Japanese	18	7.0%	4	5.0%
Samoa	16	6.2%	6	7.5%
Hispanic	13	5.0%	2	2.5%
African American	10	3.9%	7	8.8%
Asian-Caucasian Mix	9	3.5%	3	3.8%
All Others	49	19.0%	14	17.5%
Marital Status				
Divorced	47	18.8%	14	15.6%
Married	73	29.2%	27	30.0%
Separated	10	4.0%	4	4.4%
Single	114	45.6%	42	46.7%
Widowed	6	2.4%	3	3.3%

The demographic differences between offenders with STATIC-99 and STABLE-2000 do not differ proportionately, by gender, age range, ethnicity, or marital status.

Note: Table 1 excludes offenders for which no demographic data are available.

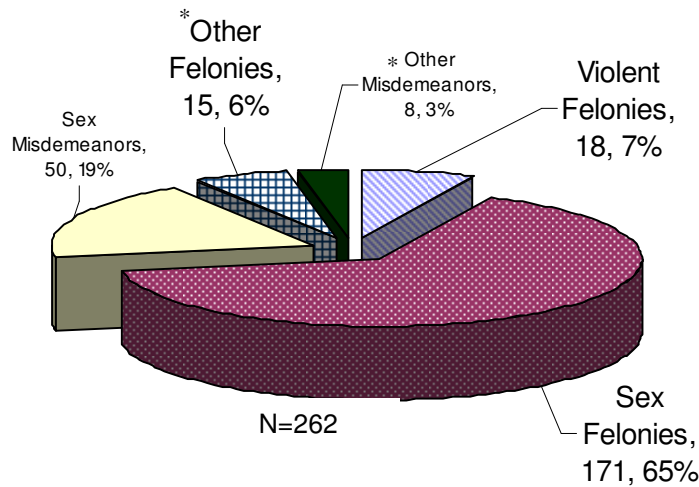
The demographic profile of sex offenders is exclusively male, and comes from diverse racial/ethnic groups. Approximately 35 percent are 50 years or older, while 70 percent are unmarried (Table 1).

Figure 1: Offenders Administered the STATIC-99, by County of Residence



Descriptive Statistics

Figure 2: Sentenced Offense Types



*Although convicted on non-sex offense charges, these offenders had previous sex offense charges that warranted a STATIC-99.

The majority of sentenced sex offenders who were administered a STATIC-99 were convicted Sex Felonies (65%), followed by Sex Misdemeanors (19%).

Table 2: STATIC-99 and STABLE-2000 Mean Scores, by Risk Class

	STATIC-99 (N=257)		STABLE-2000 (N=90)		
	Ave. Total Score	*Conf. Interval	Ave. Total Score	*Conf. Interval	
	2.46	2.35-2.57	5.28	4.95-5.61	
Risk Class	Cut-off scores	% Distrib.	Risk Class	Cut-off scores	% Distrib.
High	6-12	4.3%	High	9-12	21.1%
Moderate-High	4-5	23.3%	Moderate	5-8	27.8%
Moderate-Low	2-3	38.1%	Low	0-4	51.1%
Low	0-1	34.2%			
Total		100.0%			100.0%
Cronbach's α	0.47, $p < .001$		0.90, $p < .001$		
Pearson's r	.259, $p < .01$ (2-tailed)				

*95% confidence level

In Table 2 (above), the STATIC-99 average total score (2.46) is within the Moderate-Low risk level, while the STABLE-2000 average score (5.28) is in the Moderate risk level, both of which are within the 95% confidence range (lower and upper confidence limits are within the respective risk class cut-off ranges for STATIC-99 and STABLE offenders). With respect to internal consistency (Cronbach's α), the STATIC-99 ($\alpha = .47$) and STABLE-2000 ($\alpha = .90$) are respectively, at the low and high end of the reliability scale. Also, the risk items in both the STATIC-99 and STABLE-2000 have common sex offender risk relatedness factors, and are at the moderate end of statistical association (correlation) with each other (Pearson's $r = .259$, $p < .01$). Overall, there is good internal reliability for the STATIC-99 and even stronger reliability for the STABLE-2000.

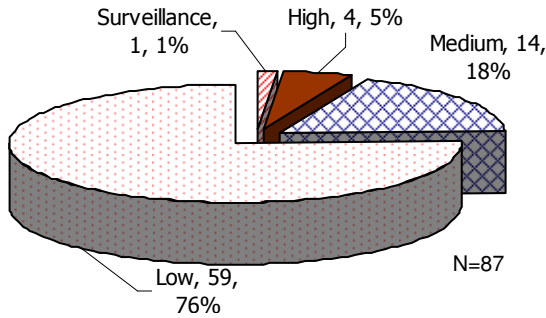
Technical Notes: The four risk classification (cut-off) scores in the STATIC-99 and the three cut-off scores in the STABLE-2000 add statistical meaning to a normally distributed sex offender population. The nationally normed cut-off scores help to classify offenders into discrete risk groups. Also, the mean total scores are only estimates, since the true values fall within a specified confidence range after considering for possible errors in the distribution. Additionally, the instrument's average item-by-item correlation (Cronbach's α) is an important measure of internal consistency. Instrument reliability determines how well the question items are statistically related to each other along a single construct (sexual deviance). Furthermore, Hawaii's Judiciary uses the STATIC-99 in conjunction with the STABLE-2000. As a result, it is critical for both instruments to have a statistical association with each other. A Pearson's r of between (+1 and -1) represents the strength and direction of relatedness between two risk instruments. If the correlation is zero, or very close to zero, there is no statistical relationship that ties the two instruments together under a single sexual deviancy construct. A correlation of +1.0 has perfect association or relatedness between the two instruments.

The STATIC-99 has adequate inter-item and rater reliability ($\alpha = .51$), while the STABLE-2000 has high reliability ($\alpha = .90$). The relationship between the STATIC-99 and STABLE-2000 have significantly related (similar) risk factors associated with sexual deviance ($r = .259$).

CSORL	STATIC-99	STABLE-2000
Surveillance	High	High
High		Moderate
High		Low
High	Moderate-High	High
Medium		Moderate
Low	Moderate-Low	Low
Medium		High
Low		Moderate
Low	Low	Low
Low		High
Low		Moderate
Low		Low

Table 3 is a risk matrix for the CSORL. Its purpose is to establish community supervision levels using risk groups from both the STATIC-99 and STABLE-2007. The Low and Moderate-Low offenders originally used in the Canadian Dynamic Supervision Project were merged into the CSORL's Low risk level. All other risk levels (Medium, High, and Surveillance) remained the same.

Figure 3: Hawaii Combined Sex Offender Risk Levels (CSORL)



Over half of the sex offenders who received the STATIC-99 and STABLE-2000 are classified at the Low level of risk.

Figure 3 consolidates the STATIC-99 and STABLE-2000 risk levels into the Hawaii Combined Sex Offender Risk Levels (CSORL), as specified in the CSORL matrix (Table 3). After combining the STATIC-99 and STABLE-2000, the Low risk offenders make up 76% of the sex offenders, followed by Medium risk offenders (18%). The High and Surveillance risk offenders make up only 6 percent of the offenders who received the STATIC-99s and STABLE-2000s.

Table 4: Sex Offender Case Planning Matrix (CSORL and LSI-R)

		LSI-R Risk Combined			
		High	Medium	Low	Total
CSORL Risk Category	Surveillance	1 (1.3%)	0 (0.0%)	0 (0.0%)	1 (1.3%)
	High	0 (0.0%)	0 (0.0%)	4 (5.1%)	4 (5.1%)
	Medium	3(3.8%)	2 (2.6%)	9(11.5%)	14 (17.9%)
	Low	1 (1.3%)	3 (3.8%)	55 (70.5%)	59 (75.6%)
	Total	5 (6.4%)	5 (6.4%)	68 (87.2%)	78 (100.0%)

Approximately 12% of the sex offenders are at elevated risk, and thus require case planning.

Note: Nearly 12% of the sex offenders meet the case planning criteria (colored cells).

Table 4 shows the proportion of offenders at various levels of elevated risk. It consolidates the CSORL and LSI-R risk groups into a 3 x 4 case planning matrix. The shaded cells are elevated risk sub-groups that require case planning efforts, (per SOMT policy). The data show that 9 out of the 78 sex offenders, or just over one-tenth (11.5%), have case planning needs due to their high risk potential for either sex offense or criminogenic recidivism.

Recidivism Analysis

Table 5: Risk Classifications, by Sex Offense and Non-Sex Offense Recidivism Rates

Sex Offender (SO) Risk Instruments							
STATIC-99 (N=257)				STABLE-2000 (N=90)			
Sex Offense (SO) Recidivism							
Risk Class	N	Re-arrests	Recidivism Rate	Risk Class	N	Re-arrests	Recidivism Rate
High (6-12)	11	1	9.1%	High (9-12)	19	1	5.3%
Moderate-High (4-5)	60	2	3.3%	Moderate (5-8)	25	1	4.0%
Moderate-Low (2-3)	98	5	5.1%	Low (0-4)	46	0	0.0%
Low (0-1)	88	2	2.3%	<i>Total</i>	<i>90</i>	<i>2</i>	<i>2.2%</i>
<i>Total</i>	<i>257</i>	<i>10</i>	<i>3.9%</i>	<i>Total</i>	<i>90</i>	<i>2</i>	<i>2.2%</i>
<i>Statistical Significance</i>		Not Significant			Not Significant		
Non Sex Offense Recidivism							
Risk Class	N	Re-arrests	Recidivism Rate	Risk Class	N	Re-arrests	Recidivism Rate
High (6-12)	11	5	45.5%	High (9-12)	19	8	42.1%
Moderate-High (4-5)	60	21	35.0%	Moderate (5-8)	25	5	20.0%
Moderate-Low (2-3)	98	32	32.7%	Low (0-4)	46	11	23.9%
Low (0-1)	88	11	12.5%	<i>Total</i>	<i>90</i>	<i>24</i>	<i>26.7%</i>
<i>Total</i>	<i>257</i>	<i>69</i>	<i>26.8%</i>	<i>Total</i>	<i>90</i>	<i>24</i>	<i>26.7%</i>
<i>Statistical Significance</i>		$\chi^2 = 14.87, p < .01$			Not Significant		
Total Recidivism							
Risk Class	N	Re-arrests	Recidivism Rate	Risk Class	N	Re-arrests	Recidivism Rate
High (6-12)	11	6	54.5%	High (9-12)	19	9	47.4%
Moderate-High (4-5)	60	23	38.3%	Moderate (5-8)	25	6	24.0%
Moderate-Low (2-3)	98	37	37.8%	Low (0-4)	46	11	23.9%
Low (0-1)	88	13	14.8%	<i>Total</i>	<i>90</i>	<i>26</i>	<i>28.9%</i>
<i>Total</i>	<i>257</i>	<i>79</i>	<i>30.7%</i>	<i>Total</i>	<i>90</i>	<i>26</i>	<i>28.9%</i>
<i>Statistical Significance</i>		$\chi^2 = 17.36, p < .01$			Not Significant		

The STATIC-99 has predictive validity over multiple risk levels for Non-SO and Total (sex and non-sex offenses) recidivism.

Table 5 examines the recidivism rates for Sex Offense (SO), Non-Sex Offense (Non-SO), and Total re-arrests, by STATIC-99 and STABLE-2000 risk levels. There are four established risk levels defined in the STATIC-99 and three risk levels in the STABLE-2000. The differences in recidivism rates between the STATIC-99 risk levels are statistically significant for Non-SO and Total recidivism, but not for SO recidivism. The STABLE-2000 revealed no statistical significance between risk levels for type of recidivism (SO, Non-SO, and Total). The lack of predictive validity may be due to the small number of offenders (N=90) analyzed in this study.

The STATIC-99 data in Table 5 show that as risk levels advance from Low through High levels, Non-SO and Total recidivism rates incrementally increase at the statistically significant levels of $p < .01$. For Total Recidivism, the 14.8% recidivism rate for Low risk offenders is substantially lower than for Moderate-Low (37.8%), Moderate-High (38.3%), and High risk (54.5%) offenders. Likewise, for Non-Sex Offense Recidivism, Low risk offenders recidivate at a rate of 12.5%, which is substantially lower than the rates for Moderate-Low (32.7%), Moderate-High (35.0%), and High risk (45.5%) offenders. The findings suggest that the STATIC-99 risk levels are predictive of recidivism (except for sex offenses alone).

The Sex Offender Management Team developed the Combined Sex Offender Risk Level (CSORL) that consolidates the risk levels from both the STATIC-99 and STABLE-2000 (see Table 3).

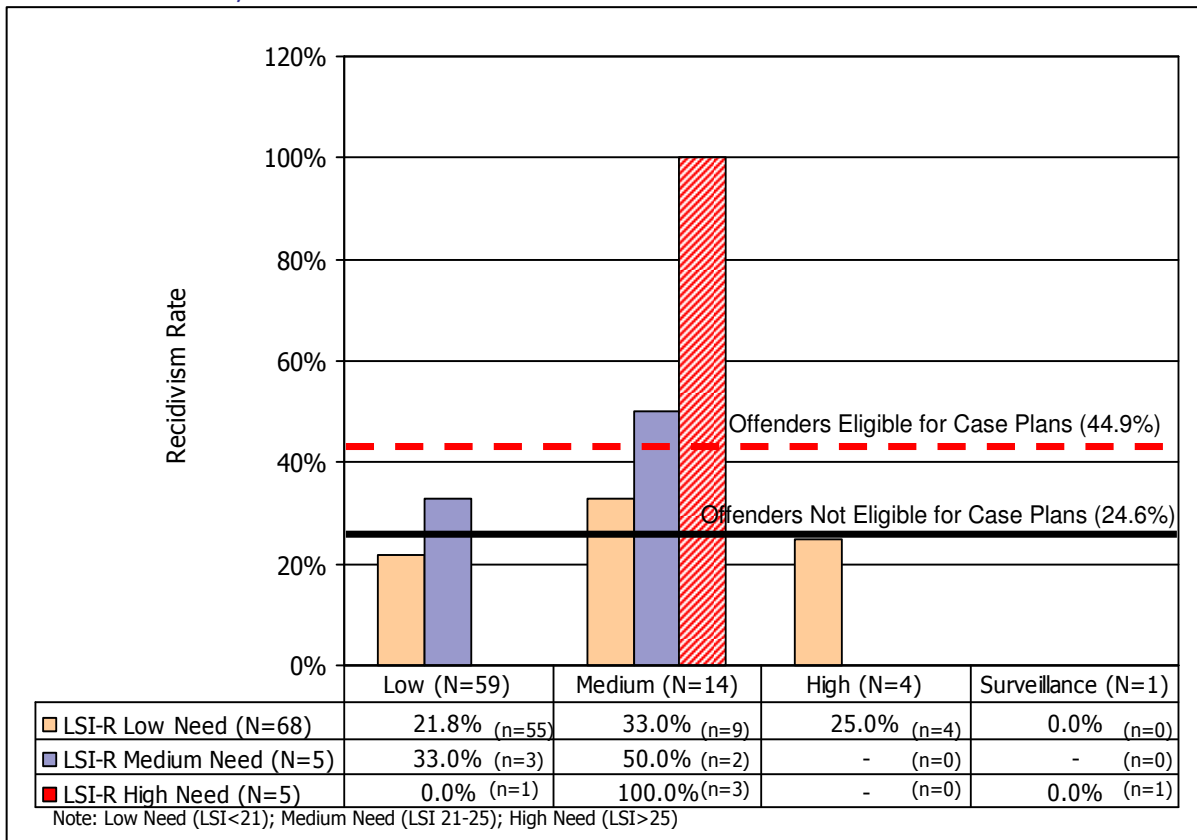
Table 6: Consolidated Sex Offender Risk Classification, By Recidivism Rates

Sex Offense Recidivism		STATIC-99 - STABLE 2000 Combined (N=78)		
Risk Class	# of Offenders	Re-arrests	Recidivism Rate	
Surveillance	1	0	0.0%	
High	4	0	0.0%	
Medium	14	2	14.3%	
Low	59	0	0.0%	
<i>Total</i>	<i>78</i>	<i>2</i>	<i>2.5%</i>	
<i>Statistical Significance</i>			Not Significant	
Non-Sex Offense Recidivism				
Risk Class	# of Offenders	Re-arrests	Recidivism Rate	
Surveillance	1	0	0.0%	
High	4	1	25.0%	
Medium	14	5	35.7%	
Low	59	13	22.0%	
<i>Total</i>	<i>78</i>	<i>19</i>	<i>24.4%</i>	
<i>Statistical Significance</i>			Not Significant	
Total Recidivism				
Risk Class	# of Offenders	Re-arrests	Recidivism Rate	
Surveillance	1	0	0.0%	
High	4	1	25.0%	
Medium	14	7	50.0%	
Low	59	13	22.0%	
<i>Total</i>	<i>78</i>	<i>21</i>	<i>26.9%</i>	
<i>Statistical Significance</i>			Not Significant	

The risk level for the Consolidated (STATIC-99 and STABLE-2000) Sex Offender risk classification system lacks statistically significant predictive validity for Sex Offense, Non-Sex Offense and Total recidivism.

Table 6 analyzes the predictive validity of the combined risk levels in the STATIC-99 and STABLE-2000. The small number of probationers (N=78) who have both the STATIC-99 and STABLE-2000 makes it difficult to evaluate the combined risk levels for predictive validity. It is noted that out of 78 sex offenders with both STATIC-99 and STABLE-2000, there were only two sex offense re-arrests.

Figure 4: Recidivism Rates of Sex Offenders, by CSORL Risk Classification, and Level of LSI-R Risk Needs



Note: Differences in recidivism rates between the CSORL risk levels are not significant.

Figure 4 depicts the recidivism rates of sex offenders who were classified at Low, Medium, High, and Surveillance risk levels by the CSORL. Recidivism rates for each CSORL risk level are presented in relationship to offenders at low risk needs (LSI-R total score < 21), medium risk needs (LSI-R total score 21-25), and high risk needs (LSI-R total score >25). Only offenders who were classified as medium risk on the CSORL had statistically significant differences in total recidivism rates, based on Low – Medium – High risk needs. Offender classified at low CSORL risk levels did not have statistically significant recidivism rates between LSI-R risk levels. Differences in recidivism rates for high and surveillance offenders on the CSORL in relation to LSI-R risk needs could not be determined because of the lack of offenders with medium and high risk needs.

Sex offenders who met the threshold for required case plans (see Table 4) recidivated at a rate of 44.9%, as compared to 24.6% for recidivists who did not meet the case plan threshold. However, the differences in recidivism rates were not statistically significant.

Table 7: Average Elapsed Time to Recidivism (Months)

STATIC-99 Risk Class	N	Months to Recidivism	STABLE-2000 Risk Class	N	Months to Recidivism
High (6-12)	6	14.5	High (9-12)	11	21.8
Moderate-High (4-5)	23	27.4	Moderate (5-8)	6	30.8
Moderate Low (2-3)	37	19.2	Low (0-4)	11	21.8
Low (0-1)	13	19.0	Average	26	18.0
Average	79	21.2	Average	26	18.0

Not Significant Not Significant

Table 7 displays the average elapsed time (months) to recidivism for offenders at various STATIC-99 and STABLE-2000 risk levels. With respect to levels of risk, offenders with STATIC-99s and STABLE-2000s do not significantly differ from each other in elapsed time to recidivism.

With respect to elapsed time to recidivism, the risk levels for offenders with STATIC-99s and STABLE-2000s do not significantly differ from each other for Total recidivism.

Table 8: Risk Items Most Sensitive to Sex Offense (SO) Recidivism

		SO Offense Recidivism Rates		
Instrument	Instrument Items	Risk Item Present	Risk Item Absent	Point Difference
STATIC-99	Prior sentencing dates	11.7%	2.1%	9.6***
	Stranger male victims.	11.1%	4.0%	7.1
	Prior non-sexual violence convictions	8.8%	3.1%	5.7***
	Prior sex offenses	8.8%	4.2%	4.6**
	Age under 25 years	8.3%	4.0%	4.3
	Index non-sexual violence	7.1%	4.5%	2.6
	Any convictions for non-contact sex	6.1%	4.6%	1.5
	Ever lived with lover for 2 yrs.	4.5%	4.9%	-0.5
	Any stranger victims	4.2%	5.0%	-0.8
	Any unrelated victims	4.0%	6.3%	-2.3
STABLE-2000	Attitudes conducive to rape	8.3%	0.0%	8.3***
	Negative emotionality or hostility	5.9%	0.0%	5.9***
	Significant social influences	4.7%	0.0%	4.7
	Hostility toward women	4.2%	0.0%	4.2
	Attitudes toward sexual entitlement	4.2%	0.0%	4.2
	Impulsive acts	4.1%	0.0%	4.1
	Poor cognitive problem solving skills	3.6%	0.0%	3.6
	General social rejection	3.5%	0.0%	3.5
	Deviant sexual preferences or interests	3.5%	0.0%	3.5
	Sex as coping	3.4%	0.0%	3.4
	Attitudes conducive to child molestation	3.4%	1.4%	2.0
	Lack of concern for others	3.2%	0.0%	3.2**
	Sex drive/preoccupation	2.9%	0.0%	2.9**
	Emotional identif. with children	2.3%	1.8%	0.5
	Lovers and intimate partner capacity	1.6%	2.9%	-1.3
Cooperation with supervision	0.0%	3.0%	-3.0	

*p<.001; **p<.01; ***p<.05

Note: Offenders who scored zero in the individual items of both the STATIC-99 and STABLE-2000 reveal the absence of risk on that specific risk item. Offenders who scored one in the individual items of the STATIC-99, or who scored one or two in the individual items of the STABLE-2000 reveal the presence of risk on the specific item.

Table 8 rank orders (from high to low) the Sex Offense recidivism rates for offenders with scored (presence of risk) items on the STATIC-99 and STABLE-2000. Table 8 also reveals the percentage point difference in recidivism between scored (presence of risk) and unscored (absence of risk) items. Three STATIC-99 risk items show statistically significant differences in recidivism rates, based on either the presence or absence of a risk item. The percent-point difference in recidivism rates for "Prior Sentencing Dates" (9.6), "Prior Non-sexual Violence Convictions" (5.7), and "Prior Sex Offenses" (4.6) are statistically significant. In the STABLE-2000, the percent-point difference in recidivism rates between present vs. absent risk items are statistically significant for "Attitudes Conducive to Rape" (8.3), "Negative Emotionality or Hostility" (5.9), "Lack of Concern for Others" (3.2), and "Sex Drive/Preoccupation" (2.9).

Table 9: Risk Items Most Sensitive to Non-Sex Offense (Non-SO) Recidivism

Non-SO Offense Recidivism Rates				
Instrument	Instrument Items	Present	Absent	Difference
STATIC-99	Prior sentencing dates	43.4%	20.1%	23.3*
	Prior non-sexual violence convictions	40.0%	20.8%	17.2**
	Prior sex offenses	38.2%	24.8%	13.4
	Stranger male victims	37.0%	25.3%	11.7
	Age under 25 years	35.4%	24.6%	14.3
	Ever live with lover for 2 years	34.8%	22.5%	12.3***
	Any stranger victims	30.6%	25.1%	5.5
	Index non-sexual violence	28.6%	26.2%	2.4
	Any unrelated victims	27.3%	25.0%	2.3
	Any convictions for non-contact sex	27.3%	26.4%	0.9
STABLE-2000	Attitudes conducive to rape	41.7%	18.7%	23.0***
	Cooperation with supervision	34.4%	19.4%	15.0
	Attitudes toward sexual entitlement	33.3%	15.7%	17.6***
	Negative emotionality or hostility	32.3%	23.1%	9.2
	Poor cognitive problem solving skills	32.1%	14.0%	18.1***
	General social rejection	29.8%	16.7%	13.1
	Deviant sexual preferences or interests	28.1%	19.0%	9.1
	Significant social influences	27.9%	21.4%	6.5
	Hostility toward women	27.1%	21.6%	5.5
	Lack of concern for others	27.0%	19.4%	7.6
	Lovers and intimate partner capacity	26.6%	20.0%	6.6
	Impulsive acts	26.5%	22.0%	4.5
	Sex as coping.	25.0%	23.1%	1.9
	Sex Drive/preoccupation	24.3%	24.1%	0.2
	Attitudes conducive to child molestation	24.1%	24.3%	-0.2
	Emotional ID with children	20.5%	27.3%	-6.8

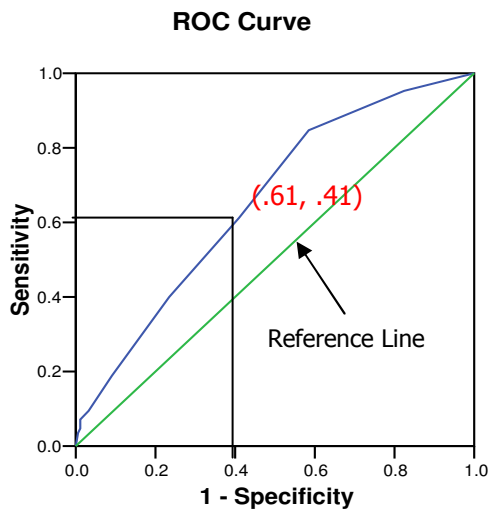
*p<.001; **p<.01; ***p<.05

Note: Offenders who scored zero in the individual items of both the STATIC-99 and STABLE-2000 reveal the absence of risk on that specific risk item. Offenders who scored one in the individual items of the STATIC-99, or who scored one or two in the individual items of the STABLE-2000 reveal the presence of risk on the specific item.

Table 9 rank orders (from high to low) the Non-SO recidivism rates for offenders with scored (presence of risk) items on the STATIC-99 and STABLE-2000, including the percentage point difference in recidivism rates for items that are scored (presence of risk) or unscored (absence of risk) items. Three STATIC-99 risk items reveal statistically significant differences in recidivism rates, based on either the presence or absence of a risk item. The percent-point difference in recidivism rates for "Prior Sentencing Dates" (23.3), "Prior Non-Sexual Violence Convictions" (17.2), and "Ever Lived with a Lover for two Years" (12.3) are statistically significant. In the STABLE-2000, the percent-point difference in recidivism rates between present vs. absent risk items are statistically significant for "Attitudes Conducive to Rape" (23.0), "Attitudes Toward Sexual Entitlement" (17.6), and "Poor Cognitive Problem Solving Skills" (18.1).

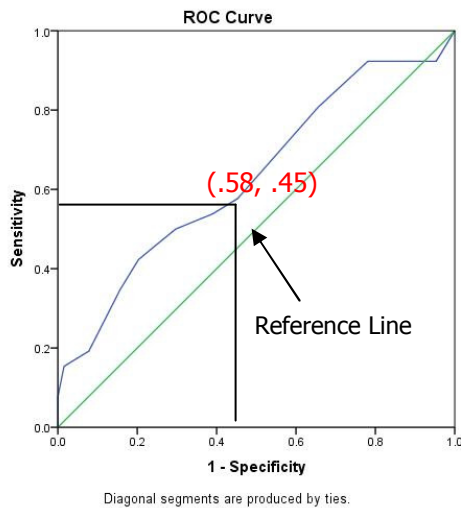
Validation

Figure 5: STATIC-99 ROCs, based on Total Recidivism



- The STATIC-99 has adequate validity in predicting SO and Non-SO recidivism (ROC=.656, $p < .001$; C.I. 589 to .724)
- There is a 41% chance that the STATIC-99 will make a classification error by placing a sex offender at higher risk, when in reality the offender is at a lower risk for recidivism.
- The STABLE-2000 has marginal validity in predicting SO and Non-SO recidivism (ROC=.631, $P < .05$; C.I. 500 TO .762).

Figure 6: STABLE-2000 ROCs, based on Total Recidivism



- There is 45% chance that the STABLE-2000 will make a classification error by placing a sex offender at higher risk, when in reality the offender is at a lower risk for recidivism.

Table 10: STATIC-99 Probability Analysis

STATIC-99 Risk Level (n=257)	Recidivism "Odds" Ratio (Exp B)	Recidivism Risk Increase (Exp B - 1)	Predictive Validity (ROCs)
Sex Offense (SO) Recidivism			
High (6-12)	4.3	330.0%	Not Significant
Moderate-High (4-5)	1.48	48.3%	
Moderate Low (2-3)	2.31	131.2%	
Low (0-1)	<i>(reference)</i>	<i>(reference)</i>	
Non-Sex Offense Recidivism			
High (6-12)	***5.83	483.3%	.644 *
Moderate-High (4-5)	**3.77	276.9%	
Moderate Low (2-3)	**3.39	239.4%	
Low (0-1)	<i>(reference)</i>	<i>(reference)</i>	
Total Recidivism			
High (6-12)	**6.92	592.0%	.644 *
Moderate-High (4-5)	**3.59	259.0%	
Moderate Low (2-3)	**3.50	250.0%	
Low (0-1)	<i>(reference)</i>	<i>(reference)</i>	

*p<.001; **p<.01; ***p<.05

The STATIC-99 has adequate predictive ability (ROC=.644) to correctly classify offenders who will recidivate (Non-Sex Offense, and Total Recidivism).

Table 10 shows the recidivism odds and relative recidivism risk for SO, Non-SO, and Total recidivism, by STATIC-99 risk levels. For Non-Sex Offenses, the three levels of risk have statistically significant odds of re-arrest; e.g., the relative odds of recidivism increases by 483% (5.8:1 odds risk) for a high risk offender, in comparison to a hypothetical low risk offender who is at even odds (1:1 odds risk) of risk. With respect to Total recidivism, the relative recidivism risk for High risk offenders increased by 592% (6.9:1 odds risk), or almost seven times the risk of recidivism relative to low risk offender.

Table 11: STABLE-2000 Probability Analysis

STABLE-2000 Risk Level (n=90)	Recidivism "Odds" Ratio (Exp B)	Recidivism Risk Increase (Exp B - 1)	Predictive Validity (ROCs)
Sex offense (SO) Recidivism			
High (>=9)	1.00	0.0%	Not Significant
Moderate (5 - 8)	1.00	0.0%	
Low (<5)	<i>(reference)</i>	<i>(reference)</i>	
Non-Sex Offense Recidivism			
High (>=9)	2.31	131.4%	Not Significant
Moderate (5 - 8)	0.795	20.5%	
Low (<5)	<i>(reference)</i>	<i>(reference)</i>	
Total Recidivism			
High (>=9)	2.86	186.4%	.631***
Moderate (5 - 8)	1.01	1.0%	
Low (<5)	<i>(reference)</i>	<i>(reference)</i>	

***p<.05

The STABLE-2000 has adequate predictive ability (ROC=.631) to correctly classify offenders who will recidivate (Total Recidivism only).

Table 11 reveals the recidivism odds and relative risk for SO and Non-SO recidivism, based on STABLE-2000 risk levels. In regard to Total Recidivism, high risk offenders are at a greater than 2.8:1 odds risk, or at increased re-arrest risk (186%), when compared to the low risk offender (reference).

Technical Notes: The odds ratio compares the relative event probabilities between two groups. Relative recidivism is defined as the risk of re-arrest occurrence in relationship to a hypothetical reference group at even (1:1) odds of re-arrest. In other words, the odds of re-arrest occurrence from a test (elevated risk) group is relative to a reference group who is hypothetically at even (1:1) odds risk (i.e., the Low risk group in the STATIC-99 and STABLE-2000).

Summary of Findings

The offender demographics presented in this report reflects a population that is exclusively male; older (one-third are age 50 or above); single (70 percent are unmarried); and comes from various racial and ethnic groups (Table 1). There is evidence of internal consistency *within* risk items (reliability) for both the STATIC-99 and STABLE-2000 (Table 2), which suggests adequate to good instrument reliability (STATIC-99, $\alpha=.47$ and STABLE-2000, $\alpha=.90$). This finding reveals that as assessment instruments, the STATIC-99 and STABLE-2000 have well defined sex offense risk items that are associated with each other ($r=.259$). With respect to predictive validity, the STATIC-99 for both Non-Sex Offenses and Total Offenses has statistically significant differences in recidivism rates, by risk levels (Table 5, 10). However, the STABLE-2000 shows no statistically significant differences in recidivism rates between risk levels for SO, Non-SO, or Total Recidivism (Table 5, 11). The lack of statistical significance for sex offense recidivism is likely due to the small number of STABLE-2000s administered ($N=90$), as well as the small number of sex crimes committed ($N=2$). With respect to the consolidated STATIC-99 and STABLE-2000 risk levels (Table 3, Figure 3) the differences in recidivism rates between risk levels are not statistically significant for recidivism of any type. When consolidating the CSORL with the LSI-R, sex offenders who meet the case-planning criteria (Table 3) recidivate at 42.9%, as compared to 23.4% for offenders who do not meet the case plan criteria (Figure 4). Finally, ROCs show statistical significance in accurately classifying offenders based on Total Recidivism only (Figure 5, 6). The probability of making classification errors remains high for both the STATIC-99 (approximately 41 percent chance of error) and STABLE-2000 (approximately 45 percent chance of error).

Conclusion

The findings of this report show that the STATIC-99 has good instrument reliability and predictive validity, which is consistent with previous findings from national studies. However, the small N count and mixed results for the STABLE-2000 make it difficult to report on this instrument's overall validity. Consequently, it is premature to evaluate the effectiveness of combining the STATIC-99 and STABLE-2000 into consolidated risk levels (Table 3), and the CSORL and LSI-R into a case planning matrix (Table 4). Although a national study (Hanson and Harris, *Assessing the Risk of Sexual Offenders on Community Supervision*, from the 2007 Dynamic Supervision Project) validated the STATIC-99 and STABLE-2000, caution needs to be applied, especially in using the case planning matrix to identify offenders in need of intensive supervision and treatment services. Classification errors associated with individual assessment instruments can be magnified when relying on statistical-based assessment models that combine risk groups from two or more risk assessment instruments.

ICIS and SOMT should continue to evaluate both the STATIC-99, and especially, the STABLE-2000, as risk classification instruments. The use of national cut-off scores needs review as additional local assessment data become available. Also, probation officers must remain vigilant in administering both the STATIC-99 and STABLE-2000 in accordance with policies and procedures set forth by each agency. Additionally, a larger STABLE-2000 sample may improve data reliability and measurement validity. Finally, quality assurance oversight by administrators and supervisors may improve the STABLE-2000's accuracy as risk assessment instrument.

The consolidated risk levels on the STATIC-99 and STABLE-2000 are not predictive for Non-SO, SO, or Total recidivism.

Adherence to current Judiciary policies and procedures and increased quality assurance efforts may help to increase the predictive validity and instrument reliability of the STATIC-99 and STABLE-2000.