AN EVALUATOR'S GUIDE TO ACCOUNTING FOR UNDETECTED SEXUAL OFFENDING AND LONG-TERM SEXUAL RE-OFFENSE RISK

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Article		
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Abstract This study examined the extent to which sexual offenders present an enduring risk for sexual recidivism over a 20-year follow-up period. Using an aggregated sample of 7,740 sexual offenders from 21 samples, the yearly recidivism rates were calculated using survival analysis. Overall, the risk of sexual recidivism was highest during the first few years after release, and decreased substantially the longer individuals remained sex offense–free in the community. This pattern was particularly strong for the high-risk sexual offenders (defined by Static-99R scores). Whereas the 5-year sexual recidivism rate for high-risk sex offenders was 22% from the time of release, this rate decreased to 4.2% for the offenders in the same static risk category who remained offense-free in the community for 10 years. The recidivism rates of the low-risk offenders were consistently low (1%-5%) for all time periods. The results suggest that offense history is a valid, but time-dependent, indicator of the propensity to sexually reoffend. Further research is needed to explain the substantial rate of desistance by high-risk sexual offenders.		

	Psychology, Public Policy, and Law 2018, Vol. 24, No. 1, 48-63	© The Crown in Right of Canada (Public Safety), 2017 http://dx.doi.org/10.1037/law0000135	
	Reductions in Risk Based on	Time Offense-Free in the Community:	
	Once a Sexual Offender	, Not Always a Sexual Offender	
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	D Ma	avid Thornton dison, Wisconsin	
	Whereas there is a common assumption the reintegrated into the community, the public countries, individuals with a history of s restrictions on housing and employment, as from merging unnoticed into the populatio assumption that individuals with a history of We modeled the long-term (25-year) risk of We found that the likelihood of new sexual sexual offending remain sexual offense-free and all initial risk levels. Nonsexual off subsequent sexual recidivism independent to with a history of sexual offenses were no r with a criminal history that did not include the risk of sexual recidivism need to im determine time periods where individuals conditions and restrictions associated with	It most individuals with a criminal record can be eventually c has different expectations for sexual offenders. In many exual offenses are subject to a wide range of long-term well as public notification measures intended to prevent them n of law-abiding citizens. This article examines the testable fsexual crime present an enduring risk for sexual recidivism. sexual recidivism in a large, combined sample ($N > 7,000$), d offenses declined the longer individuals with a history of in the community. This effect was found for all age groups ending during the follow-up period increased the risk of f the time free effect. After 10 to 15 years, most individuals nore likely to commit a new sexual offense than individuals sexual offenses. Consequently, policics designed to manage lude mechanisms to adjust initial risk classifications and with a history of sexual crime should be released from the the "sexual offender" label.	
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HANSON ET AL. (2018)

- Used data from 20 different samples (follow-up time of 6 months to 31.5 years (M = 8.2, SD = 5.3)
 - Hazard rates for sexual recidivism were modeled using discrete time survival analysis
 - Meaning? For every six months a ratio was generated: those detected of sexual offending / those who presumably have not sexually reoffended. This tells us the absolute recidivism rates in each discrete time period.
 - Once we have that, we can use survival analysis to obtain the hazard rate, which helps us to estimate the likelihood of future sexual reoffending

HANSON ET AL. (2018)

Notable findings:

- · Relative risk reductions were constant across risk levels
 - Regardless of Static-99R scores, all individuals show a time free effect
 - Individuals with higher scores take longer to reach the statistical definition of desistance (<2% in this article)
- Aging in the community (once accounted for by using Static-99R) was not related to recidivism risk, and it did not interact with the time free effect
- Non-sexual offense convictions are associated with increased risk for sexual offending, but this does not erase the time free effect.
 - Risk will increase but then start decreasing again

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THORNTON ET AL. (2021)

- Aims: Make the Hanson et al. (2018) results usable for evaluators/clinicians in an applied way
 - Extrapolate beyond 10-year sexual recidivism estimates
 - Estimate the sexual recidivism risk for someone with prior sexual offenses but whose most recent offense is nonsexual
 - Calculate years reductions in risk for those who remain offense free in the community (e.g., time free effect)

Rate Rate EVALUATORS CAN USE THE 2021 STATIC-99R EVALUATOR'S WORKBOOK 1 0.7 [0.5 1.0 1.2 0.7 2.1 1.5 2 1 1.1 0.8 1.4 1.8 1.1 2.9 2.2 4 11 1.6 1.2 1.9 2.5 1.7 3.8 3.1 0 11 2.2 1.8 2.7 3.7 5.1 3.9 6.7 6.3 2 111 4.0 5.2 7.2 6.8 8.9 8.9 3 11 6.5 5.8 7.2 10.1 8.5 11.9 12.1 4 17.8 12.8 11.7 14.1 18.8 16.4 21.5 23.4 6 17.6 15.8 19.6 25.0 21.5 28.9 31.2 7 17.6 15.8 19.6 25.0 21.5 23.4 23.4 6 17.6 17.6 15.8 19.6 25.0 21.5 28.9
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BUT WHAT IF...

- You are using a dynamic risk instrument alongside the Static-99R?
- His governing offense is not his index offense?
- His life expectancy is greater than 10 years but less than 20 years?





CALCULATOR DEMONSTRATION: 15-YEAR RATE

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UNDERSTANDING UNDETECTED SEXUAL OFFENDING IN RISK ASSESSMENT

 Original Research Article

 Do Sanctions Affect Undetected Sexual Offending:

 Sexual Abuse 2022, Vol. 0(0) 1–25 © The Author(s) 2022 Article reuse guidelines: saepub.com/ournals-permissions DOI: 10.1177/10790632221139178 journals.sagepub.com/home/sax ©SAGE

 Sharon M. Kelley¹ ©, Rachel E. Kahn², James C. Mundt² ©, and Robert M. Barahal¹

WHY IS THIS IMPORTANT?

- · Estimated recidivism rates from actuarial tools rely on official criminal databases
- Developers of these tools acknowledge the estimated rates do not account for undetected sexual offending (Thornton et al., 2021)

WHY IS THIS IMPORTANT?

• Evaluators have an obligation to describe this in court (Scurich & John, 2019)

• Some laws require the court to consider the likelihood an individual will "commit future act of sexual violence, irrespective of whether he might be apprehended for, or convicted of, such crimes" (Wisconsin v. Stephenson, 2020)

CURRENT STUDY

- For this study, we were interested in whether an event changes the future probability for detection
- Do sanctions for sexual offenses increase the detection rate for future sexual offending behavior?

HYPOTHESES AND AIMS

- 1. The proportion of detected victims prior to the first release for a sexual offense will be lower than the proportion of victims detected after the first release
- 2. The proportion of victims detected following each successive sanction will increase incrementally
- 3. Time at risk in the community will decrease following each successive sanction
- 4. When time at risk in the community is accounted for, the average number of total victims per year will be constant

<u>Definitions</u>	
• Detected:	Anything that counts towards the Static-99R (detained, arrested, charged, convicted)
 Detected sexual offenses: 	Defined to be consistent with Category A and B sexual offenses per Static-99R (Must be 12+ years old)
• Detected victim:	Victim characteristics were only coded when there was a contact sexual offense

Definitions

Undetected sexual offenses:	<u>illegal contact</u> sexual acts that could have led to a charge/conviction if detected (must be 12+ years old)
Undetected victim:	identifiable victim of an <u>illegal contact</u> sexual act that could have led to a charge/conviction if detected
May have been investig	ated but was never arrested, detained, etc.

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SUBJECTS (N = 200)

- Ages when last in community: 14 64 (M = 31.95, SD = 9.54)
 4.5% < age 18
- Last Static-99R: M = 6.52 (SD = 1.92)
- Offense profile:
 - Children only: 56.0%
 - Adults only: 9.5%
 - Children and adults: 34.5%

AMPLE CHARACTERISTICS ($N = 200$)				
Ethnie	city	Diagnosis		
Indigenous	3.0%	Pedophilic D/O	49.5%	
American		Other Specified Paraphilia	13.5%	
Black	25.5%	- Coercive		
Latino	2.0%	Other Specified -	10.5%	
White	69.5%	Hebephilia		
		Sexual Sadism D/O	14.0%	
		ASPD	55.5%	
		Substance Use D/O	49.5%	
		Major Mental Illness	8.5%	
		Note. Cases can have >1 diagnosi	S	

MEASURES

- Sexual History Disclosure Questionnaires (regarding offenses against adults and/or children)
 - Self-report of detected and undetected sexual contact with children and adults
 - Instructs individuals to include their age at time of offense, victim's age at time of offense, gender of victim, relationship to the victim, and type of sexual act (e.g., force; grooming)
 - Truthful polygraph validating questionnaire
- 2001 2016

PROCEDURES

- Criminal charges, sentencing dates, custody time, release dates, and current diagnoses obtained from criminal and treatment records
- Timeline created to track custody and release periods following each sanction for a sex offense
- Offenses coded for victim characteristics (e.g., gender; relationship) and level of community supervision (none, bail, probation, parole, custody).

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INTERRATER RELIABILITY (N=20)

ICC single measure estimates

≥ .75 Excellent Cicchetti, 1994

Total undetected victims ICC = 0.97 Undetected victims prior to first arrest ICC = 0.99 Undetected victims following first arrest ICC = 0.81 Static-99R at 1st release ICC = .88 Static-99R at last sanction ICC = .87





CASES WITH RELEASES

- Of the 200 cases, seven were found SVP following 1st sanction
- An additional four cases were not released until after their 2nd sanction (sexually reoffended in prison/jail)
- n = 189 cases were released immediately following their first sanction/prison time whereas n = 193 were released at least once at some point following a sanction
 - n = 193 used for demographic analysis
 - n = 189 used to test the four hypotheses in the current study

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HI THE PROPORTION OF DETECTED VICTIMS PRIOR TO THE FIRST RELEASE FOR A SEXUAL OFFENSE WILL BE LOWER THAN THE PROPORTION OF VICTIMS DETECTED AFTER. THE FIRST RELEASE.

- n = 189 individuals released following 1^{st} sanction
- A chi-square test of independence examining the relation between victim type (undetected versus detected) prior to and after the first sanction was significant, χ^2 (1) = 45.70, $p \le .001$, Cramer's V = .130.
 - Proportion of victims detected at first arrest was 22.6%
 - Proportion of victims detected after was 34.6%

eleases	N	Type of Victim	Before/At 1 st Arrest	1 st Release Period	2 nd Release Period	3 rd Release Period	Chi square test
		Not Detected	868	409			
	189	Detected	253 (22.6%) ^a	232 (36.2%) ^b			X ² (1) = 37.95, <i>p</i> < .001, Cramer's V = .147
		Not Detected	589	304	311		
2	142	Detected	172 (23.0%) ^a	171 (36.0%) ^b	153 (33.0%) ^b		X ² (2) = 29.86, <i>p</i> < .001 Cramer's V = .133
		Not Detected	315	168	204	208	
3	75	Detected	98 (23.7%) ^a	75 (31.0%) ^b	82 (28.7%) ^{ab}	65 (23.8%) ^{ab}	$X^{2}(3) = 5.72, p = .13$ Cramer's V = .069

$H3\,$ time at risk in the community will decrease following each successive sanction.

	1st Release Period	2nd Release Period	3rd Release Period	4th Release Period
N		M (SD) Days in	Community	
189	1002.33 (1185.21)			
142	988.65 (1152.28) ^a	769.15 (982.07) ^b		
75	978.95 (1233.10) ^a	685.15 (889.83) ^b	709.55 (882.89) ^{ab}	
35	669.09 (913.39) ^a	571.57 (960.80) ^a	692.71 (916.53) ^a	636.83 (817.32) ^a

H4 when time at risk in the community is accounted for, the average number of total victims per year will be constant.

		1st Release Period	2nd Release Period	3rd Release Period	4th Release Period
N		Expec	cted Marginal Mean V	ictim Count/Person/	/Year
189	Undetected Detected Total	0.79 0.45 1.24			
142	Undetected Detected Total	0.79 0.45 1.24	1.04 0.51 1.55		
75	Undetected Detected Total	0.84 0.37 1.21	1.45 0.58 2.03	1.43 0.45 1.87	
35	Undetected Detected Total	0.62 0.50 1.12	1.06 0.68 1.74	0.68 0.57 1.25	0.80 0.61 1.41

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THINGS TO NOTE

- High risk samples will sexually reoffend quicker and have more victims but will be detected faster
 - With each offense, the probability for detection increases
- Low risk samples will be slower to reoffend and have less victims but will be harder to detect
- The current sample was appeared to be higher risk than average (Static-99R of 4 at first release period)
 - This may be why they had a high detection rate at the time of their first sanction (21%) and spent little time in the community

3/14/23

IMPLICATIONS FOR PRACTICE

ADJUSTING RECIDIVISM ESTIMATES TO ALLOW FOR UNDETECTED OFFENDING

- Risk estimates for the individual are based on statistical estimates of rates of detected sexual recidivism for persons with similar scores on risk instruments
- Allowing for undetected offending means estimating what these risk estimates would have been if recidivism had included both detected and undetected reoffending
- · At least two statistical models have been developed to do this
 - Hanson et al., 2003
 - Scurich & John, 2019

HANSON ET AL. 2003

Hanson, R. K., Thornton, D., & Price, S. (2003, October 9). *Estimating sexual recidivism rates:* Observed and undetected [Conference session]. Association for the Treatment of Sexual Abusers (ATSA) Annual Research and Treatment Conference, St. Louis, MO, United States.

FROM HANSON ET AL., 2003

RRR x DRI = ORR

RRR = ORR / DRI

RRR = Real Recidivism Rate

ORR = Observed Recidivism Rate

DRI = Detection Rate per Individual

DRI DEPENDS ON DRV AND # OF VICTIMS IN FOLLOW UP PERIOD

• DRV = Detection rate per victim

• # of Victims in follow up = # of victims if not detected by end of follow up

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ESTIMATES OF DRV FROM KELLEY ET AL.

- Proportion of victims detected in the first release period (n = 189)
 0.36
- Proportion of victims detected for all cases who had at least one release following a sanction (n =193)

- 0.31

- Options
 - Use proportion from first release period 0.36
 - Use 0.31 as based on most victims

ESTIMATES OF # OF VICTIMS

- About 1 new victim per year
 - First Release Period = 1.24
 - Mean of Marginal Means = 1.38

• Median victims per offending individual:

- Med = 5.0 (95% CI: 4.0, 6.0)

FOR $DRV = 0.36$		
Detection Rate per Victim (DRV)	0.36	5
Expected Number of Victims per Recidivist	5	5
For one hundred recidivists		
	Average N Caught after Victim	Cumulative N Undetected
Before first victim	() 100
Victim 1	36	64
Victim2	23.04	40.96
Victim 3	14.7456	26.214
Victim 4	9.437184	16.777210
Victim 5	6.03979776	5 10.73741824
Cumulative % Caught after 5 Victims	89.26258176	ő
Proportion Caught after 5 victims	0.892625818	3

FOR DRV = 0.31		
Detection Rate per Victim (DRV)	0.31	
Expected Number of Victims per Recidivist	5	ō
For one hundred recidivists		
	Average N Caught after Victim	Cumulative N Undetected
Before first victim	() 100
Victim 1	31	. 69
Victim2	21.39	9 47.61
Victim 3	14.7591	32.8509
Victim 4	10.183779	22.667121
Victim 5	7.02680751	15.64031349
Cumulative % Caught after 5 Victims	84.35968651	
Proportion Caught after 5 victims	0.843596865	5

ESTIMATING TRUE 5-YEAR RECIDIVISM RATES

RRR for 5-Years = Observed Recidivism for 5-Years / 0.84

(95% CI: .89, .77)

For Example:

- <u>Observed 5-year Rate = 26% (</u>5-yr rate for a Static-99R score of 6)
- RRR for 5-Years = 26% / 0.84 = <u>30.9% (95% CI: 29.2%, 33.7%)</u>

PULLING IT TOGETHER

STEPS TO EXTRAPOLATION

- 1. Start with the estimated 5-year rate from the actuarial instruments
- 2. Extrapolate to account for undetected sexual offending in the 5-year risk estimate
- 3. Consider life expectancy
- 4. Extrapolate from the *true* 5-year risk estimate to account for lifetime risk

LIFETIME = 20 YEARS

- Mr. Red is a healthy 40yo man with no substantial medical conditions and who is being examined for possible SVP commitment
- He has never participated in sex offense specific treatment
- Static-99R = 4
- STABLE-2007 = 7
 - Static/Stable = IVa Above Average Risk with a 5-yr rate of <u>13.6%</u>

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LIFETIME = 20 YEARS

- Step 2: Obtain the true 5-year rate by accounting for undetected sexual offended
- 13.6% / .84 = <u>16.2%</u> (95% CI: 15.3%, 17.7%)

LIFETIME = 20 YEARS

- Step 3: Consider life expectancy
- Mr. Red has no major medical conditions that could reduce his life expectancy.
- The average 40 yo male in the U.S. can be expected to live another 39 years
 - See: <u>https://www.ssa.gov/OACT/STATS/table4c6.html</u>
- We can extrapolate his sexual reoffense risk out to 20 years







MR. GREEN

- Mr. Green is a 74-year-old man who has been civilly committed as an SVP for many years. He has typical medical needs but no substantial medical problems.
- He was participating in SOT at one point, but he has since dropped out of treatment and declined any recommended treatment interventions
- At the time he entered the SVP facility, Mr. Green had a high density of dynamic risk factors and treatment needs. He made a small amount of treatment progress prior to dropping out.

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MR. GREEN: STEP 1

- Static-99R = 5
- VRS-SO pretreatment = 39
- VRS-SO change = 2
- 5-year risk estimate = 28.1%







MR. GREEN: STEP 3

- What is lifetime for Mr. Green?
- How many years should we extrapolate out to?

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MR. GREEN: STEP 3

See: <u>https://www.ssa.gov/OACT/STATS/table4c6.html</u>

70	0.022381	72,915	14.59
71	0.024185	71,283	13.91
72	0.026266	69,559	13.25
73	0.028660	67,732	12.59
74	0.031401	65,791	11.95

MR. GREEN: STEP 4 Extrapolate from the true 5- year rate to the true 12-year rate	Recidivism Risk?	Date of Release from Index Offense Consisting After Index offense Consisting After Index offense Valie in the community? Offender removed from community for any reason after release from Index Offense? RESET	Independence Yeari is Community Officials Free 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	vdently Modelled Risk Vear End Date sVALUE: sV	Reidtui Lifetine Risk	



AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
20	19	18	17	16	15	14	13	12	11	10	9
55.0	54.6	54.1	53.6	53.0	52.2	51.4	50.4	49.3	48.0	46.4	44.6
50.2	49.7	49.2	48.6	47.9	47.1	46.1	45.1	43.8	42.4	40.6	38.6
45.4	44.9	44.3	43.7	42.9	42.0	41.0	39.8	38.5	36.9	35.0	32.
40.8	40.3	39.7	39.0	38.1	37.2	36.1	34.8	33.3	31.6	29.6	27.
36.5	35.9	35.3	34.5	33.6	32.6	31.4	30.0	28.4	26.6	24.4	21.
32.4	31.8	31.1	30.3	29.3	28.2	27.0	25.5	23.8	21.8	19.5	16.
28.6	27.9	27.2	26.3	25.3	24.2	22.8	21.3	19.5	17.4	15.0	12.
25.0	24.3	23.6	22.6	21.6	20.4	19.0	17.4	15.5	13.3	10.7	7.
21.8	21.0	20.2	19.3	18.2	16.9	15.4	13.8	11.8	9.5	6.8	3.
18.8	18.0	17.2	16.2	15.0	13.7	12.2	10.5	8.4	6.0	3.3	0.
16.0	15.3	14.4	13.3	12.2	10.8	9.3	7.4	5.3	2.9	0.0	
13.5	12.7	11.8	10.8	9.6	8.2	6.6	4.7	2.5	0.0		
11.3	10.5	9.5	8.5	7.2	5.8	4.1	2.2	0.0			
9.3	8.4	7.5	6.4	5.1	3.7	2.0	0.0				
7.5	6.6	5.6	4.5	3.2	1.7	0.0					
5.8	5.0	4.0	2.8	1.5	0.0						
4.4	3.5	2.5	1.3	0.0							
3.1	2.2	1.2	0.0								
1.9	1.0	0.0									
0.9	0.0										
0.0											

LIMITATIONS AND FUTURE DIRECTIONS

- Highly selected sample of individuals ultimately committed as SVPs in WI
 - Everyone who was released reoffended
 - No way to investigate those who may have naturally desisted
 - But likely generalizable to other SVP-like samples
- Not generalizable to routine cases or community samples

LIMITATIONS AND FUTURE DIRECTIONS

- Average age of the sample was 32 when last in the community
- Unknown if the results can be applied to patients who have been committed for lengthy periods of time
- Does not account for the time free effect
- Does not account for non-contact offenses & number of offenses to a single victim

LIMITATIONS AND FUTURE DIRECTIONS

- We have yet to investigate potential co-variates (Static-99R scores, offense type, diagnosis, etc.)
- We just received IRB approval to work on two projects:
 - Comparing victim and offender characteristics among white and black men with detected an undetected offenses
 - Regression analysis that will create a more comprehensive model of the detected sexual reoffense ratio. This will allow us to examine whether the odds change substantially as a result of risk level, offense type, diagnosis, etc.)

QUESTIONS?

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