**Understanding and Assessment
Summary Report**

Validity of common risk assessment measures for women incarcerated for serious violent offences in Victoria

✓ The LSI-R:SV and LS/RNR performed reasonably well in a population of women designated as serious violent offenders, identifying which women were likely to reoffend at a level better than chance.

✓ The HCR-20[V3] was not able to identify which women were more likely to reoffend. However, the H scale demonstrated a strong relationship with violent reoffending (although this relationship declined over time).

✓ Very few participants were assessed as low risk. This suggests that current assessment processes could be streamlined by eliminating the screening assessment for women designated as serious violent offenders.

May 2022

Background

Despite comprising a relatively small proportion of the total prison population in Australia, the number of women in prison has increased significantly in recent years, growing by 64% between 2009 and 2019 (Australian Bureau of Statistics, 2019). This growth underscores the need to ensure that risk assessment measures commonly used in forensic mental health and correctional settings to inform decisions including sentencing, parole, post-release monitoring and access to rehabilitation programs are applicable to women. Evaluation of risk can have a profound impact on those being assessed. Yet most risk assessment measures have been developed using research conducted primarily with male samples. Ensuring that risk assessment measures are valid for women is critical to ensure their effective treatment and management, and to reduce societal harm.

Risk assessment measures commonly used in forensic mental health and correctional settings to assess women

Level of Service/Risk Need Responsivity (LS/RNR)

Assesses the rehabilitation needs of general offenders and their risk of reoffending (low, moderate or high).
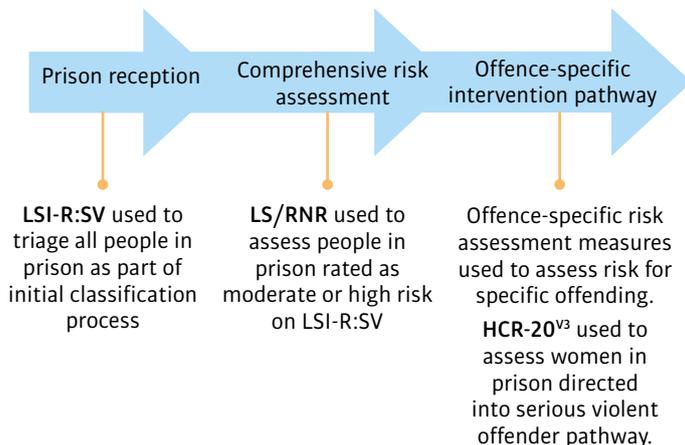
Level of Service Inventory-Revised: Screening Version (LSI-R:SV)

A condensed screening version of the LS/RNR that can be used when it is not feasible to complete the full version.

Historical Clinical Risk 20 Version 3 (HCR-20[V3])

A clinical guide for the structured assessment of a person's risk of violence risk comprising three subscales: Historical scale (H scale), Clinical scale (C scale), and Risk Management scale (R scale).

How these risk assessment measures are used in Victoria's prison system to assess women convicted of a serious violent offence

Prison reception → Comprehensive risk assessment → Offence-specific intervention pathway

LSI-R:SV used to triage all people in prison as part of initial classification process

LS/RNR used to assess people in prison rated as moderate or high risk on LSI-R:SV

Offence-specific risk assessment measures used to assess risk for specific offending.

HCR-20[V3] used to assess women in prison directed into serious violent offender pathway.

Aims of the study

There is a large body of research examining how well the LS/RNR, HCR-20[V3] and, to a lesser extent, the LS-R:SV predict reoffending amongst men. In comparison, not many studies have examined the accuracy of these measures for women, particularly in Australia.

This study aims to address some of these gaps in knowledge by examining the predictive validity of the LSI-R:SV, LS/RNR and HCR-20[V3] for reoffending in a sample of women in prison in Victoria, Australia who have been convicted of a serious violent offence. The study provides valuable information about whether risk assessment measures regularly used in Australian settings are valid and useful in the local context when assessing women who are convicted of a violent offence.

What is predictive validity?

Predictive validity tells you how well a score on an assessment measure can predict reoffending.

What is a serious violent offence?

A serious violent offence is defined in section 3 of the *Corrections Act 1986* (Vic). It includes murder, causing serious injury intentionally, aggravated burglary, making a threat to kill and false imprisonment).

Method

Sample

The sample comprised 79 adult women who were sentenced to prison in Victoria, Australia for a serious violent offence between 1 January 2015 and 31 December 2017 and who completed an LSI-R:SV, LS/RNR and/or HCR-20[V3] during their incarceration period.

Participant characteristics

79 women in prison

33.2 yrs (average age at time of risk assessment)

17 (21.5%) Aboriginal and Torres Strait Islander

This is a significantly higher proportion than the number of Aboriginal and Torres Strait Islander peoples in Victoria's overall prison population.
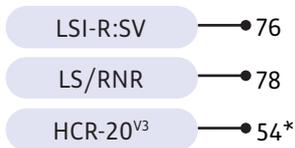
Procedure

Risk assessment data were extracted from Corrections Victoria's administrative databases. The data were then linked to Victoria Police databases to obtain information about reoffending up to 31 December 2019. Reoffending was defined as any new criminal charges following release from prison.

Not all participants had complete risk assessment data for all three assessment measures. Accordingly, the cohort was separated into subsamples based on the risk measure/s of interest. Where a participant had been assessed multiple times with the same measure, the last assessment completed during their period of imprisonment before release was used for the analysis. If a participant was not assessed with the measure during their period of imprisonment, the first assessment completed in the community post-release was used.

Number of women in each risk assessment subsample
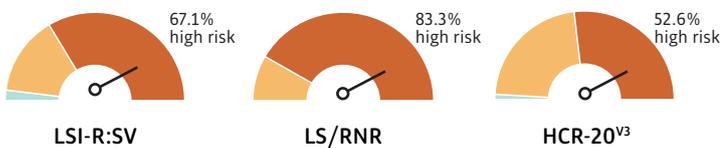
- LSI-R:SV — 76
- LS/RNR — 78
- HCR-20[V3] — 54*

* An additional 18 women had data for the H scale (in the absence of a full HCR-20[V3] assessment), meaning a total of 65 participants had at least the H scale score from the HCR-20[V3].

Results

Level of risk and characteristics of reoffending

On each of the three risk assessment measures, more than half of the participants were categorised as high risk. **Very few participants were assessed as having a low level of risk/need on any of the three measures**. This likely reflects the high risk nature of the population; by definition, women designated as serious violent offenders must have committed offences involving serious violence and are, therefore, less likely to be classified as low risk.
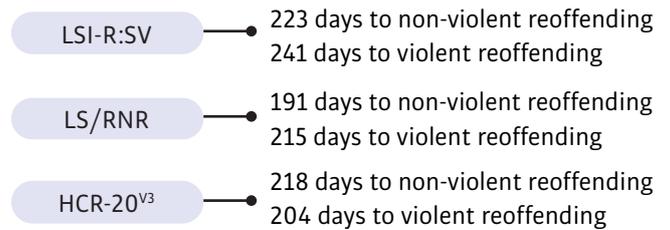
67.1% high risk — LSI-R:SV
83.3% high risk — LS/RNR
52.6% high risk — HCR-20[V3]

There was also a very high rate of reoffending across the sample. This is unsurprising given the high risk nature of the population. Rates of reoffending were higher among those assessed as high risk compared to moderate risk across the measures.

Almost two-thirds (62%) of participants were charged with a further offence of some sort. Non-violent offences were more frequent than violent offences, with one in three (36.7%) participants reoffending violently and over half (58.2%) reoffending non-violently. Non-violent offences typically occurred sooner following release from prison than violent offences.

Average time to first offence following release from prison for each risk assessment subsample

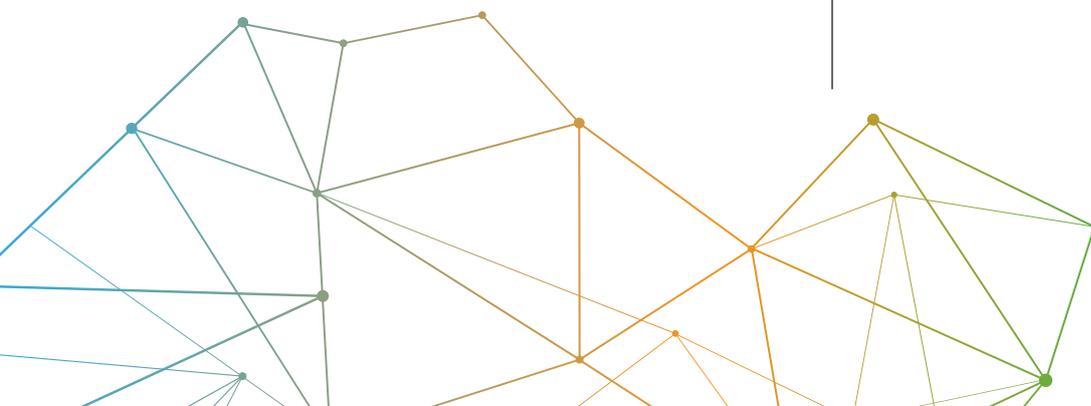| Measure	Time to reoffending
LSI-R:SV	223 days to non-violent reoffending / 241 days to violent reoffending
LS/RNR	191 days to non-violent reoffending / 215 days to violent reoffending
HCR-20[V3]	218 days to non-violent reoffending / 204 days to violent reoffending

Predictive validity

Of the three measures, the LS/RNR performed strongest across all reoffending outcomes and was able to predict any, violent and non-violent reoffending at a level better than chance.

LSI-R:SV predicted violent reoffending but not non-violent reoffending.

HCR-20[V3] total score and risk rating did not predict any reoffending outcomes, but the H scale score on its own was able to identify violent reoffending at a level better than chance.

Ability of risk assessment measures to predict different reoffending outcomes

	ANY	VIOLENT	NON-VIOLENT
LSI-R:SV	✗	✓	✗
LS/RNR	✓	✓	✓
HCR-20[V3]	✗	✗	✗
H Scale	✗	✓	✗

Predictive values

Positive predictive values (PPV) represents the proportion of women in the sample classified as high risk who went on reoffend.

Negative predictive values (NPV) represents the proportion of women in the sample classified as low risk who did not go on to reoffend.

The LS measures were more accurate when predicting who would *not* reoffend violently (NPV) than who *would* go on to reoffend violently (PPV) within 12 months post-release. This was reversed for the HCR-20[V3] which performed better at predicting who would reoffend in the 12 months post-release than predicting who would not reoffend (although the overall predictive performance of the HCR-20[V3] was poor).

PPV values also suggested that all measures were generally more accurate in predicting any reoffending than violent reoffending.
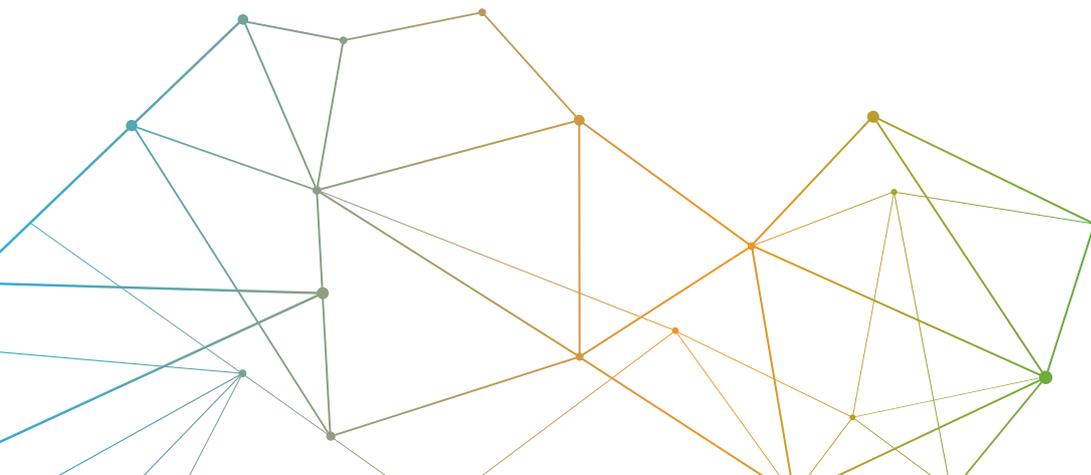
Predictive validity over time

Generally, predictive accuracy of the LS measures increased over time, with both the LSI-R:SV and LS/RNR performing best at predicting reoffending outcomes at two years post-release from prison. In comparison, the HCR-20[V3] demonstrated poor predictive accuracy over the follow up period, performing at a level no better or worse than chance at almost all time points. While the HCR-20[V3] H scale initially demonstrated a strong relationship with violent reoffending at three months post-release, this declined over time.

Predictive accuracy for violent reoffending and any reoffending over time

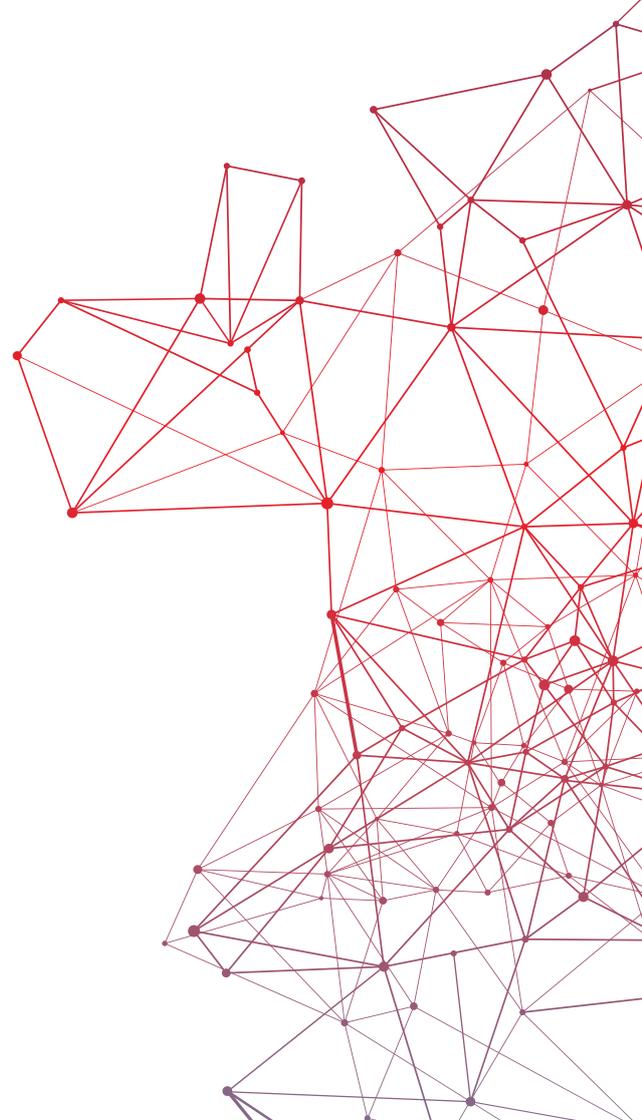|		3 months	6 months	12 months	2 years
LSI-R:SV	Violent	Poor	Adequate	Adequate	Good
	Any	Poor	✕	Poor	Good
LS/RNR	Violent	Good	Good	Good	Good
	Any	Adequate	Adequate	Adequate	Good
HCR-20[V3]	Violent	✕	✕	Poor	✕
	Any	✕	✕	✕	✕
H scale	Violent	Good	Poor	Poor	Poor
	Any	Poor	Poor	Poor	✕

✕ predictive performance no better or worse than chance

Key implications

- While both the LSI-R:SV and LS/RNR predicted reoffending at a level better than chance, the LS/RNR demonstrated the strongest relationship with general and violent reoffending over the follow up period. In comparison, the HCR-20[V3] was not able to identify which women designated as serious violent offenders were more likely to reoffend. However, the H scale demonstrated a strong relationship with violent reoffending (although this relationship declined over time).

- Generally, predictive accuracy of the LS measures increased over time. This was consistent with the performance of the LS measures over time in a similar sample of men designated as serious violent offenders in prison in Victoria.

- Overall, there was a moderate relationship between risk assessment scores and reoffending. This is relatively consistent with past research involving small samples of women in prison and suggests that the relationship between risk assessment measures and reoffending tends to be stronger in male samples.

- The small number of participants categorised as low risk on the LSI-R:SV and LS/RNR suggests that Victoria's current assessment process could potentially be streamlined by eliminating the screening assessment for women convicted of serious violent offences.

Key limitations

- Unique and complex sample that may not be generalisable to other jurisdictions.

- Small sample size may have impacted the validity and reliability of the findings.

- Not all offenders received the same risk assessment which meant that separate, non-mutually exclusive groups were compared.

- Impact of treatment or management interventions on risk level was not examined.

Swinburne University of Technology recognises the historical and cultural significance of Australia's Indigenous history and the role it plays in contemporary education. We therefore acknowledge the traditional custodians of the land that Swinburne occupies, the Wurundjeri people, and pay respect to Elders past and present.