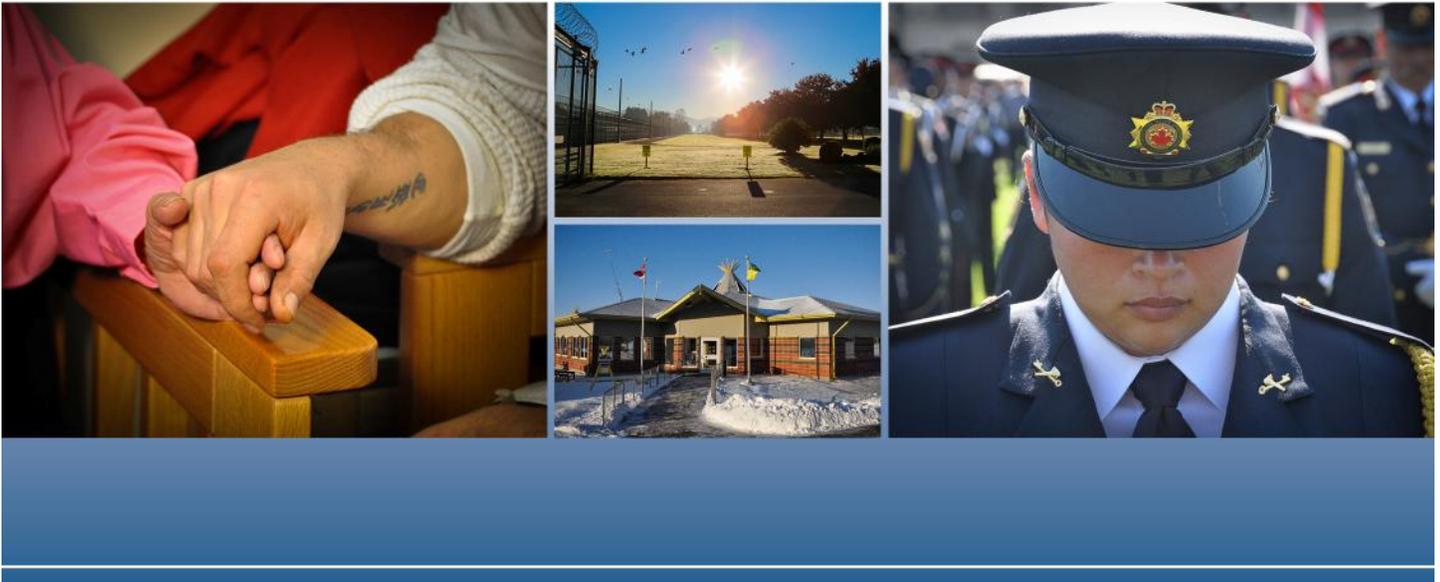


# CORRECTIONAL SERVICE CANADA

CHANGING LIVES. PROTECTING CANADIANS.



## RESEARCH REPORT

### The Adjustment of the Security Reclassification Scale for Women (SRSW): Elimination of Administrative Segregation

2019 N° R-431

Ce rapport est également disponible en français. Pour en obtenir un exemplaire, veuillez vous adresser à la Direction de la recherche, Service correctionnel du Canada, 340, avenue Laurier Ouest, Ottawa (Ontario) K1A 0P9.

This report is also available in French. Should additional copies be required, they can be obtained from the Research Branch, Correctional Service of Canada, 340 Laurier Ave. West, Ottawa, Ontario K1A 0P9.



**The Adjustment of the Security Reclassification Scale for Women (SRSW): Elimination of  
Administrative Segregation**

Kaitlyn Wardrop

Correctional Service of Canada

September 2019



## **Acknowledgements**

The author would like to extend her gratitude to Shanna Farrell MacDonald, Angela Smeth, and Dena Derkzen for their ongoing support with this project. Thanks to Lynn Stewart and Bruno Jean for their methodological and editorial guidance. Additional thanks to various members of the Women Offender Sector, Aboriginal Initiatives Directorate, and Correctional Operations and Programs Sector for additional methodological guidance and support. Finally, thanks to Cindy Cooper-Johnson and Paul Squires from the Offender Management System group for flexibility on the timelines for this project.



## Executive Summary

**Key words:** *security classification, women offenders, SRSW, reliability, validity.*

In the Correctional Service of Canada (CSC) security classification occurs at admission to federal custody and throughout incarceration to ensure that offenders are placed at security levels that are appropriate to manage their risk of institutional misconduct, including violence and threat to public safety in the event of an escape. The Security Reclassification Scale for Women (SRSW) is an actuarial tool which, in conjunction with professional judgement, contributes to women's security reviews following initial placement. Recent changes in the use of segregation in CSC and the expected elimination of the use of segregation with the passage of Bill C-83 will affect one particular item in the SRSW pertaining to the offender having a history of segregation placements. This research examined how the psychometric properties of the SRSW would be affected by the elimination of this item and whether the continued use of the tool with the item removed is advisable.

The study used data from a recent validation study on the SRSW (Thompson & Wardrop, 2018), which comprised 645 SRSW reviews finalized between April 1, 2014 and March 31, 2017 for 499 women. Reliability and validity (convergent and predictive) were assessed for both the original SRSW and the revised SRSW (omitting the segregation-related item). Where possible, analyses were conducted separately by Indigenous identity.

Results showed that the SRSW remains reliable and valid for use with Indigenous and non-Indigenous women despite the removal of the segregation-related item (an item where only 8.4% of women received the full weighting). Also encouraging, using the revised SRSW, the proportions of women recommended for minimum-, medium-, and maximum-security placements were similar for Indigenous and non-Indigenous women. These proportions are similar to those resulting from the original version of the SRSW. The revised SRSW had acceptable internal consistency and was predictive of offender security level placement, institutional offences (minor and serious), discretionary release, and returns to federal custody.

It is recommended that the adjusted SRSW cut-offs identified in this study be integrated into the Offender Management System algorithm for security reclassification. Additional factors such as Aboriginal Social History, institutional adjustment, escape risk, and risk to public safety will still be taken into consideration by CSC staff prior to the final security placement decision being made. Overall, on-going use of this tool is supported by the findings of this study.



## Table of Contents

Acknowledgements.....	ii
Executive Summary.....	iii
List of Tables.....	v
List of Figures.....	vi
List of Appendices.....	vii
Introduction.....	1
Method.....	3
Participants.....	3
Measures.....	3
Analytic Approach.....	5
Results.....	7
Recalibrating the SRSW.....	7
Revised SRSW Scores and Security Recommendations.....	8
Reliability of the SRSW.....	11
Convergent Validity.....	13
Predictive Validity.....	14
Summary of Findings.....	21
Future Directions.....	22
Conclusion.....	22
References.....	23



## List of Tables

Table 1 <i>Demographic and incarceration characteristics of SRSW sample (N = 499)</i> .....	4
Table 2 <i>Revised SRSW scores – range, mean, standard deviation, first, second (median), and third quartile by Indigenous identity</i> .....	9
Table 3 <i>Distribution of original SRSW security level recommendations and revised SRSW security level recommendations by Indigenous identity</i> .....	10
Table 4 <i>Relationship between original SRSW security level recommendations and revised SRSW security level recommendations by Indigenous identity</i> .....	11
Table 5 <i>Item-total polyserial correlations and descriptive statistics for the original and revised SRSW items</i> .....	13
Table 6 <i>Association between original and revised SRSW security level recommendations with risk and reintegration potential ratings for all women</i> .....	14
Table 7 <i>Association between security level recommended by the original and revised SRSW and security level recommended by the caseworker</i> .....	16
Table 8 <i>Association between security level recommended by the original and revised SRSW and the OSL placement</i> .....	17
Table 9 <i>Rates of misconduct by recommended security level</i> .....	18
Table 10 <i>Rates of discretionary release by original and revised SRSW security level recommendations</i> .....	19
Table 11 <i>Rates of returns to custody by original and revised SRSW security level recommendations</i> .....	20
Table A1 <i>Original Security Reclassification Scale for Women (SRSW) Items and Weights</i> .....	25
Table A2 <i>Original SRSW cut-points</i> .....	26
Table A3 <i>Revised SRSW cut-points</i> .....	26
Table A4 <i>Revised SRSW discretionary ranges</i> .....	26
Table B1 <i>Differences in original SRSW security level recommendations and revised SRSW security level recommendations by Indigenous identity and security level recommendation</i> .....	27
Table B2 <i>Polychoric correlation matrix of revised SRSW items by Indigenous identity</i> .....	28



## List of Figures

<i>Figure 1.</i> Range of possible revised SRSW scores, including cut-offs for each security recommendation.....	8
<i>Figure A1.</i> Range of possible original SRSW scores, including cut-offs for each security recommendation.....	25



## **List of Appendices**

Appendix A: Supplemental Information of the Security Reclassification Scale for Women.....	25
Appendix B: Supplemental Results .....	27



## Introduction

Security classification is an essential component in the management of institutional risk and contributes to efforts to preserve public safety (Farr, 2000; Motiuk, 1997). In the Correctional Service of Canada (CSC) decisions regarding security classification and penitentiary placement are informed by assessments of institutional adjustment, escape risk, and risk to the public in the event of an escape. These decisions, whether initial placement or a review, are ultimately made using professional judgement, in conjunction with security recommendations provided by actuarial assessments. Initial security classification decisions are made with the help of the Custody Rating Scale (CRS), while subsequent classification decisions for women use the Security Reclassification Scale for Women (SRSW) (Commissioner's Directive (CD) 705-7; CD 710-6). Consistently, previous research has shown that the SRSW is both a reliable and valid tool for reviewing security level placement for both Indigenous and non-Indigenous women (Blanchette & Taylor, 2005; Gobeil, 2008; Gobeil & Blanchette, 2007; Thompson, McConnell & Paquin-Marseille, 2013; McConnell, 2012; Thompson & Wardrop, 2018).

Recent changes in the use of segregation in CSC and the expected elimination of the use of segregation with the passage of Bill C-83 will affect one particular item in the SRSW pertaining to the offender having a history of "involuntary segregation due to being a danger to others or to the institution during review period." This current research will assist in determining whether with the elimination of this item the tool continues to have good psychometric properties and, ultimately, whether continued use of the SRSW is advisable.

The following research questions will be examined:

1. Does the revised SRSW (omitting the segregation-related item) change how women are being recommended for minimum, medium, and maximum security?
2. Is the revised SRSW and its items still reliable for use in the security reclassification of women?
  - a. How does the reliability of the tool compare to the original SRSW?
3. Is the revised SRSW tool valid for use in the security reclassification of women?
  - a. Does the revised SRSW recommendation have convergent validity with other risk assessments such as static risk and reintegration potential?

- b. Does the revised SRSW recommendation predict institutional and release outcomes?
  - i. Caseworker recommendations and offender security level (OSL) placement
  - ii. Minor and serious institutional offences
  - iii. Type of conditional release
  - iv. Revocations of conditional release
- c. How does the validity of the revised SRSW recommendation compare to the original SRSW recommendation in predicting institutional and release outcomes?
  - i. Caseworker recommendations and OSL placement
  - ii. Minor and serious institutional offences
  - iii. Type of conditional release
  - iv. Revocations of conditional release

## **Method**

### **Participants**

The study used data from a recent validation study on the SRSW (Thompson & Wardrop, 2018). The final sample included 645 SRSW reviews completed for a total 499 women offenders. The reviews were finalized between April 1, 2014 and March 31, 2017. SRSW reviews were included when a CRS which was used for initial security level placement was present on the same term. All data compiled for the current study were extracted from databases of the Offender Management System (OMS), which holds all computerized offender records for federal offenders.

Overall, the women in the sample were serving sentences of approximately three years, on average, with the majority (56.4% of non-Indigenous and 74.1% of Indigenous women, respectively) of whom were sentenced for schedule 1 (e.g., assault, sexual interference) or homicide offences. The demographic and incarceration characteristics of the sample differed by Indigenous identity. Indigenous women tended to be younger and were more likely to be convicted of schedule 1 or homicide offences and receive higher initial security classifications according to the CRS (see Table 1).

### **Measures**

The following information related to the SRSW was captured: the total score on the tool, the security level placement recommended by the tool, as well as the individual item scores from the assessments. All information regarding when the review period started and ended, as well as when the final security placement was determined, was also captured.

In addition to the SRSW-specific information, demographic-, sentence-, and risk-related factors were examined for the women in the study to assess differences in profiles across Indigenous ancestry. These factors included: marital status, type of sentence, length of sentence, offence type, initial security placement, overall static risk, and reintegration potential.

Several measures were extracted in order to assess convergent validity. Specifically, information regarding the initial Criminal Risk Index (CRI) and the assessments of reintegration potential were collected closest to the date of the SRSW assessment. Although there is no ideal tool by which to assess convergent validity of the SRSW, these particular assessments were chosen to assess convergent validity because, to some extent, they consider institutional

adjustment, escape risk, and/or risk to the public in the event of an escape.

Table 1

*Demographic and incarceration characteristics of SRSW sample (N = 499)*

	Non-Indigenous Women (N = 283)	Indigenous Women (N = 216)
	% (n)	% (n)
<b>Marital status</b>		
Has partner	31.8 (90)	27.3 (59)
Single	67.5 (191)	69.9 (151)
Unknown	†	2.8 (6)
<b>Length of aggregate sentence</b>		
Three years or less	44.2 (125)	43.5 (94)
More than three years	43.8 (124)	42.6 (92)
Indeterminate	12.0 (34)	13.9 (30)
<b>Type of offence</b>		
Schedule I or homicide	56.4 (160)	74.1 (160)
Other	43.5 (123)	25.9 (56)
<b>Initial security level</b>		
Minimum	14.5 (41)	5.1 (11)
Medium	67.8 (192)	74.1 (160)
Maximum	17.7 (50)	20.8 (45)

† Numbers suppressed due to frequency less than five.

Finally, the following data were captured to assess the predictive validity of the SRSW scale: caseworker recommendation and OSL placement, having committed a serious or minor institutional offence, escapes,<sup>1</sup> whether release was discretionary or statutory, and revocation of conditional release for any reason.

<sup>1</sup> It was not possible to examine escapes as no women escaped or attempted to escape who were included in the study or the specific timeframes following the review periods.

## **Analytic Approach**

Much of the analysis examining the original and revised SRSW assessment tool was descriptive. For example, means, variability, and distributions were examined of the total score as well as the recommended security level placement. Bivariate analyses examined if there were notable differences in recommended placement by Indigenous identity and SRSW assessment version (original or revised). Statistically significance differences were assessed using Wald chi-square and the strength of these differences were assessed using gamma. Gamma values range from -1.00 (perfect negative association) to +1.00 (perfect positive association). A gamma value of 0 would suggest there is no association between two variables. In general, gamma values of less than or equal to .30 represent a weak effect; values of .31 to .60 represent a moderate effect; and values greater than .60 represent a strong effect (Healey & Prus, 2010).

Reliability of the original and revised SRSW assessments were assessed using item-to-total polyserial correlations and ordinal alpha. Based on the polychoric correlation matrix, ordinal alpha represents the degree to which items are inter-related and is preferred over Cronbach's alpha when working with ordinal data (Zumbo, Gadermann, & Zeisser, 2007). Alpha values range from 0 to 1, with higher scores representing greater internal consistency. If similar strength indicators are used as with Cronbach's alpha, values ranging between .70 and .80 are usually accepted as having good internal consistency; however, lower values can also be considered acceptable depending on whether a variety of constructs are being assessed (Kline, 2013).

Given that women could have multiple assessments completed, it was necessary to adjust our statistical methods to examine convergent and predictive validity.<sup>2,3</sup> Thus, one security classification was randomly selected for each woman in our study when assessing convergent validity and predictive accuracy with institutional offences. The most recent security

---

<sup>2</sup> In order to assess if the clustering of SRSW events within a single woman would bias standard error estimates an Interclass Correlation was calculated (Yadav & Agarwal, 2013). The Interclass Correlation assesses the correlation between events clustered within an individual as well as the correlations between individuals. If the correlation is high, it means that less unique information is being added within subjects as compared to the information that is being uniquely added between individuals. In the case of non-Indigenous and Indigenous women, the ICC was 0.51 and 0.64, respectively. As such, it is necessary to adjust standard error calculations to account for clustering or to change sampling strategies to provide only one assessment per individual.

<sup>3</sup> The exception to this was analyses examining the association between the original and revised SRSW in predicting caseworker recommendations and OSL placement (actual security level placement post-SRSW). Associations of all security reviews were examined using a combination of chi-square tests and gamma effect sizes.

classification was chosen when assessing predictive accuracy with release type and returns to federal custody. These approaches result in the correct estimations of standard error for our study.

Wald chi-square and gamma were used to assess whether there was convergence between the CRI and Reintegration Potential and both the original and revised SRSW security level recommendations.

Finally, predictive validity was assessed in a number of ways. Logistic regression was used to assess the association between both the original and revised SRSW security level recommendations having a discretionary release. Logistic regression produces an estimate of the odds of an event occurring. In this study, the event is whether an offender experiences discretionary release. In conjunction with the significance level, an odds ratio of 1.0 would indicate no difference in the odds of discretionary release among offenders recommended for one security level compared to others. An odds ratio greater than 1.0 would indicate an increased likelihood of discretionary release among offenders recommended for one security level compared to another, and an odds ratio less than 1.0 would suggest a decreased likelihood of discretionary release among offenders recommended for one security level compared to another.

For outcomes requiring consideration of time at risk (i.e., time to experiencing a minor or serious institutional offence or having a conditional release revoked), Cox regression was used to compare the original and revised SRSW security level recommendations in predicting offender outcomes. Cox regression considers the risk (i.e., hazard) of an event occurring (e.g., any revocation) as a function of time and predictor variables. A hazard ratio of 1.0 would indicate no impact of a particular factor; whereas, a hazard ratio greater than 1 would indicate an increased risk for revocation, and a hazard ratio less than 1 would suggest a decreased risk of revocation.

In addition, Area Under the Curve (AUC) statistics<sup>4</sup> were calculated to assess the overall predictive magnitude of the original or revised SRSW security level recommendations. AUC statistics have the added strength of being able to statistically compare the accuracy of two predictive models (i.e., the predictive accuracy of the original SRSW security level recommendations to the revised recommendations).

---

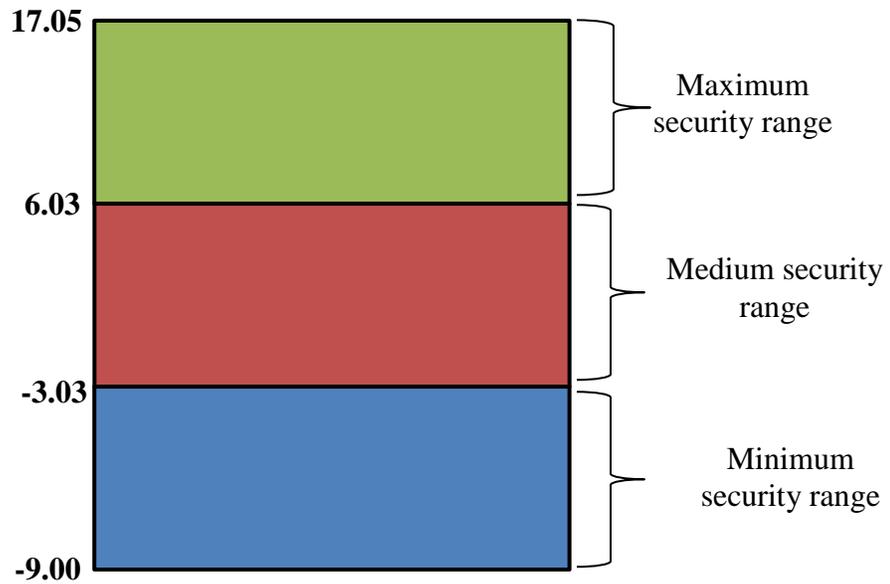
<sup>4</sup> An AUC statistic is a commonly used measure of effect size employed when assessing the predictive accuracy of risk/need scales. Within the social sciences, a value of .56 represents a small effect, .64 represents a moderate effect, and .71 represents a large effect (Rice & Harris, 2005).

## Results

### Recalibrating the SRSW

Due to the recent changes in the use of segregation and the expected elimination of segregation with the passing of Bill C-83, the SRSW was revised to remove the item “involuntary segregation due to being a danger to others or the institution.” While the segregation-related item is the most heavily weighted item (see Table A1 in Appendix A), the majority of women (60.6%) were not placed in administrative segregation during the review period. Thirty-one percent of women experienced between one and two segregation placements and only 8.4% women received the highest weight on the item, representing three or more placements in administrative segregation during the review period. As detailed in Appendix A, the range of possible scores of the revised SRSW spans -9.00 to 17.05. New cut-points to recommend women to minimum, medium, and maximum security were determined by maintaining the proportions of available scores within each security level recommendation. For example, in the original SRSW assessment tool, a minimum security designation was recommended for women scoring within -10.10 and -2.65; a range of 7.45 points, representing 22.9% of the total range of SRSW scores ( $7.45/32.50 = 0.229$ ). As such, 22.9% of the revised SRSW total score range resulted in women scoring between -9.00 and -3.03 being recommended for minimum security (see Table A3 in Appendix A for detailed calculations). Figure 1 displays the revised SRSW assessment tool.

Figure 1. Range of possible revised SRSW scores, including cut-offs for each security recommendation



### Revised SRSW Scores and Security Recommendations

Although the range of possible scores for the SRSW is -9.00 to 17.05, the revised SRSW scores in the current cohort ranged from -9.00 to 14.30. Women had a mean score of -0.22 (medium security). As shown in Table 2, similar results are found when disaggregating by Indigenous identity. Generally, the range of scores show that the majority of both Indigenous and non-Indigenous women were recommended to minimum or medium security.

Table 2

*Revised SRSW scores – range, mean, standard deviation, first, second (median), and third quartile by Indigenous identity*

Statistic	Non-Indigenous Women	Indigenous Women	All women
Range	-9.00 to 13.00	-9.00 to 14.30	-9.00 to 14.30
Mean	-0.46	0.06	-0.22
Standard deviation	4.92	5.34	5.11
First quartile	-4.35	-4.20	-4.35
Second quartile (median)	-1.10	-0.58	-0.90
Third quartile	3.05	3.65	3.35

As shown in Table 3, although there were minor variations in the percentage of Indigenous and non-Indigenous women recommended for each security level, differences were not statistically significant. The proportions of recommended security levels were similar between Indigenous and non-Indigenous women for both the original SRSW security level recommendations ( $\chi^2(2) = 0.672, p = .715$ ) and the revised SRSW security level recommendations ( $\chi^2(2) = 0.461, p = .794$ ). Similarly, there were no statistically significant changes between the original SRSW tool and the revised SRSW tool in the proportion of women being recommended for minimum, medium, and maximum security (see Table B1 in Appendix B for significance testing).

Table 3

*Distribution of original SRSW security level recommendations and revised SRSW security level recommendations by Indigenous identity*

	Original SRSW Security Level Recommendations		Revised SRSW Security Level Recommendations	
	Non-Indigenous women	Indigenous women	Non-Indigenous Women	Indigenous Women
	% (n)	% (n)	% (n)	% (n)
Minimum	40.7 (143)	38.4 (113)	38.5 (135)	36.1 (106)
Medium	45.0 (158)	45.2 (133)	48.4 (170)	49.7 (146)
Maximum	14.3 (50)	16.3 (48)	13.1 (46)	14.3 (42)

The revised SRSW security level recommendations were very strongly related to the original SRSW security level recommendations, with 85.2% of non-Indigenous women and 86.7% of Indigenous women recommended for the same security level (see Table 4). While there were some differences in the level of security recommended for a minority of women (e.g., 14.7% of non-Indigenous women originally recommended for minimum security were recommended for medium security and 22% of non-Indigenous women originally recommended for maximum security were recommended for medium security according to the revised SRSW. Combined with the significance testing in Table B1 in Appendix B, these discrepancies represent a small number of women and are not statistically significant. Notably, no women originally assessed as minimum security were rated as maximum security according to the revised SRSW and, vice versa, no women originally assessed as maximum security were rated as minimum security according to the revised SRSW.

Table 4

*Relationship between original SRSW security level recommendations and revised SRSW security level recommendations by Indigenous identity*

	Non-Indigenous Women			Wald $\chi^2$ $\gamma$ (ASE)
	Revised SRSW Security Level Recommendation			
	Minimum	Medium	Maximum	
	% (n)	% (n)	% (n)	
Original SRSW Security Level Recommendation				
Minimum	85.3 (122)	14.7 (21)	0.0 (0)	417.1***
Medium	8.2 (13)	87.3 (138)	4.4 (7)	0.98 (0.01)
Maximum	0.0 (0)	22.0 (11)	78.0 (39)	
	Indigenous Women			Wald $\chi^2$ $\gamma$ (ASE)
	Revised SRSW Security Level Recommendation			
	Minimum	Medium	Maximum	
	% (n)	% (n)	% (n)	
Original SRSW Security Level Recommendation				
Minimum	86.7 (98)	13.3 (15)	0.0 (0)	371.1***
Medium	6.0 (8)	90.2 (120)	3.8 (5)	0.98 (0.01)
Maximum	0.0 (0)	7.5 (11)	88.1 (37)	

*Note.* Gamma ( $\gamma$ ) values of less than .30 represent a weak effect, values between .31 and .60 represent a moderate effect, and values greater than .60 represent a strong effect (Healey & Prus, 2015). \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

### Reliability of the SRSW

The item-to-total polyserial correlations were calculated for the SRSW, with the segregation-related item included and excluded. Most items were weakly to moderately associated with the total score (see Table 5). Notably, the segregation-related item had the strongest correlation with the original SRSW total score (0.82 for non-Indigenous women and 0.84 for Indigenous women); however, when it was removed from consideration, other items increased in strength of association. While the original SRSW tool had acceptable internal

consistency (ordinal alpha values of 0.68 for non-Indigenous women and 0.74 for Indigenous women), the internal consistency of the revised SRSW tool was somewhat lower in comparison (ordinal alpha value of 0.60 for non-Indigenous women and 0.68 for Indigenous women). This decrease in internal consistency is not entirely unexpected, however, as alpha estimates are dependent on the number of items included in the scale (Cortina, 1993). Since the revised SRSW tool has eight items as opposed to the original's nine, a decrease in reliability would have been expected.<sup>5</sup>

---

<sup>5</sup> A review of the polychoric correlation matrix (see Table B2 in Appendix B) shows that the reliability of the measure could likely be improved with the removal of "Ever unlawfully at large from temporary absence, work release, or supervision" and "Number of successful escorted temporary absences" for non-Indigenous women. While for Indigenous women, reliability could be improved with the removal of "Ever unlawfully at large from temporary absence, work release, or supervision." However, given the mandate in the CCRA to assess escape risk in security classification and the face validity of these items, it is necessary they remain within the SRSW assessment tool.

Table 5

*Item-total polyserial correlations and descriptive statistics for the original and revised SRSW items*

	Original SRSW			
	Non-Indigenous Women		Indigenous Women	
	<i>r</i>	M (SD)	<i>r</i>	M (SD)
Correction plan: Program motivation	0.68	-0.83 (2.12)	0.67	-0.88 (2.04)
Number of convictions for serious disciplinary offences	0.72	-0.28 (1.62)	0.74	-0.12 (1.67)
Number of recorded incidents	0.70	1.22 (1.94)	0.68	1.16 (1.92)
Total number of successful escorted temporary absences	0.11	0.21 (0.99)	0.41	0.04 (1.01)
Custody Rating Scale Incident History	0.53	-0.23 (1.15)	0.56	0.13 (1.26)
Pay level	0.44	-0.46 (0.58)	0.55	-0.22 (0.62)
Ever unlawfully at large from work release, temporary absences, or community supervision	0.16	-0.14 (0.38)	0.14	-0.14 (0.39)
Maintains regular positive family contact	0.43	0.06 (0.58)	0.49	0.09 (0.60)
Number of times offender was placed in segregation for being a danger to others or the institution	0.82	0.61 (2.32)	0.84	1.01 (2.49)
	Revised SRSW			
Correction plan: Program motivation	0.75	-0.83 (2.12)	0.74	-0.88 (2.04)
Number of convictions for serious disciplinary offences	0.74	-0.28 (1.62)	0.72	-0.12 (1.67)
Number of recorded incidents	0.70	1.22 (1.93)	0.73	1.16 (1.93)
Total number of successful escorted temporary absences	0.14	0.21 (0.99)	0.41	0.04 (1.01)
Custody Rating Scale Incident History	0.54	-0.23 (1.15)	0.59	0.13 (1.26)
Pay level	0.48	-0.46 (0.58)	0.56	-0.22 (0.62)
Ever unlawfully at large from work release, temporary absences, or community supervision	0.20	-0.14 (0.38)	0.13	-0.14 (0.39)
Maintains regular positive family contact	0.43	0.06 (0.58)	0.52	0.09 (0.60)

### **Convergent Validity**

As previously noted, there is no ideal choice among the case management tools used in CSC by which to assess convergent validity of the SRSW. Nevertheless, results showed that both the original and revised SRSW security level recommendations demonstrated moderate associations with measures of risk and reintegration potential (see Table 6). Due to small

numbers, results could not be disaggregated by Indigenous identity; however, the trends appear similar for Indigenous and non-Indigenous women.

Table 6

*Association between original and revised SRSW security level recommendations with risk and reintegration potential ratings for all women*

	Original SRSW Security Level Recommendation			Wald $\chi^2$ $\gamma$ (ASE)
	Minimum	Medium	Maximum	
	% (n)	% (n)	% (n)	
<b>CRI<sup>a</sup></b>				
No rating	13.5 (30)	12.0 (26)	†	61.4***
Low	22.4 (50)	16.2 (35)	†	0.40 (0.05)
Low-Moderate	12.1 (27)	6.5 (14)	8.3 (5)	
Moderate	20.6 (46)	11.1 (24)	10.0 (6)	
High-Moderate	17.0 (38)	22.2 (48)	10.0 (6)	
High	14.4 (32)	31.9 (69)	60.0 (36)	
<b>Reintegration Potential</b>				
Low	16.1 (36)	38.0 (82)	70.0 (42)	70.7***
Medium	76.2 (170)	54.6 (118)	30.0 (18)	0.53 (0.06)
High	7.6 (17)	7.4 (16)	0.0 (0)	
	Revised SRSW Security Level Recommendation			Wald $\chi^2$ $\gamma$ (ASE)
	Minimum	Medium	Maximum	
	% (n)	% (n)	% (n)	
<b>CRI<sup>a</sup></b>				
No rating	13.7 (28)	12.1 (29)	†	43.8***
Low	21.0 (43)	16.7 (40)	9.3 (5)	0.32 (0.06)
Low-Moderate	11.7 (24)	7.1 (17)	9.3 (5)	
Moderate	21.5 (44)	11.3 (27)	9.3 (5)	
High-Moderate	16.1 (33)	22.1 (53)	11.1 (6)	
High	16.1 (33)	30.8 (74)	55.6 (30)	
<b>Reintegration Potential</b>				
Low	18.5 (38)	35.8 (86)	66.7 (36)	52.0***
Medium	75.1 (154)	55.8 (134)	33.3 (18)	0.43 (0.06)
High	6.3 (13)	8.3 (20)	0.0 (0)	

*Note.* Gamma ( $\gamma$ ) values of less than .30 represent a weak effect, values between .31 and .60 represent a moderate effect, and values greater than .60 represent a strong effect (Healey & Prus, 2015). <sup>a</sup>Chi-square and gamma values exclude cases with no CRI rating given the ordinal nature of these analytic approaches. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . † Numbers suppressed due to frequency less than five.

### Predictive Validity

The predictive validity of the original and revised SRSW security level recommendations

was examined and contrasted for the following outcomes: caseworker recommendations, OSL placement, institutional offences (both minor and serious), discretionary release, and revocations of conditional release. Generally, the findings indicated that both the original and revised SRSW security level recommendations were predictive of offender outcomes. Due to small numbers, results could not be disaggregated by Indigenous identity; however, the trends appear similar for Indigenous and non-Indigenous women.

Both original and revised SRSW security recommendations were highly correlated with the security level recommendations provided by the caseworker (see Table 7) and the OSL placement (see Table 8). The majority of women received revised SRSW security recommendations that aligned with caseworker recommendations (75.2% of non-Indigenous women and 72.3% of Indigenous women, respectively) and OSL placement (68.7% of non-Indigenous women and 72.3% of Indigenous women, respectively). Similar levels of concordance can be seen for the original SRSW.

Table 7

*Association between security level recommended by the original and revised SRSW and security level recommended by the caseworker*

	Non-Indigenous Women				Indigenous Women			
	Original SRSW Security Level Recommendation <sup>a</sup>			Wald $\chi^2$ $\gamma$ (ASE)	Original SRSW Security Level Recommendation <sup>a</sup>			Wald $\chi^2$ $\gamma$ (ASE)
	Minimum % (n)	Medium % (n)	Maximum % (n)		Minimum % (n)	Medium % (n)	Maximum % (n)	
Security Level Recommended by Caseworker								
Minimum	75.5 (105)	13.3 (19)	0.0 (0)	272.2***	72.5 (79)	9.2 (11)	0.0 (0)	228.8***
Medium	23.7 (33)	75.5 (108)	16.2 (6)	0.93 (0.02)	27.5 (30)	75.6 (90)	18.6 (8)	0.95 (0.01)
Maximum	†	11.2 (16)	83.8 (31)		0.0 (0)	15.1 (18)	81.4 (35)	
	Revised SRSW Security Level Recommendation <sup>b</sup>				Revised SRSW Security Level Recommendation <sup>b</sup>			
	Revised SRSW Security Level Recommendation <sup>b</sup>			Wald $\chi^2$ $\gamma$ (ASE)	Revised SRSW Security Level Recommendation <sup>b</sup>			Wald $\chi^2$ $\gamma$ (ASE)
	Minimum % (n)	Medium % (n)	Maximum % (n)		Minimum % (n)	Medium % (n)	Maximum % (n)	
Security Level Recommended by Caseworker								
Minimum	75.0 (96)	14.7 (23)	0.0 (0)	245.6***	69.7 (69)	12.7 (17)	0.0 (0)	200.8***
Medium	24.2 (31)	71.3 (112)	18.0 (7)	0.92 (0.02)	30.3 (30)	70.9 (95)	15.8 (6)	0.92 (0.02)
Maximum	†	14.0 (22)	82.1 (32)		0.0 (0)	16.4 (22)	84.2 (32)	

*Note.* Column totals may not sum to 100% due to rounding. Security reviews where the original SRSW total score fell within the 10% discretionary ranges were removed from consideration as these would not be considered decision discrepancies. Gamma ( $\gamma$ ) values of less than .30 represent a weak effect, values between .31 and .60 represent a moderate effect, and values greater than .60 represent a strong effect (Healey & Prus, 2015).<sup>a</sup> The numbers in this table are reflective of 319 security reviews for non-Indigenous women and 271 security reviews for Indigenous women.<sup>b</sup> These numbers are reflective of 324 security reviews for non-Indigenous women and 271 reviews for Indigenous women. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . † Numbers suppressed due to frequency less than five.

Table 8

*Association between security level recommended by the original and revised SRSW and the OSL placement*

	Non-Indigenous Women				Indigenous Women			
	Original SRSW Security Level Recommendation <sup>a</sup>			Wald $\chi^2$ $\gamma$ (ASE)	Original SRSW Security Level Recommendation <sup>a</sup>			Wald $\chi^2$ $\gamma$ (ASE)
	Minimum % (n)	Medium % (n)	Maximum % (n)		Minimum % (n)	Medium % (n)	Maximum % (n)	
OSL placement								
Minimum	75.5 (105)	20.3 (29)	0.0 (0)	188.8***	76.2 (83)	12.6 (15)	0.0 (0)	120.8***
Medium	23.7 (33)	68.5 (98)	37.8 (14)	0.88 (0.03)	23.9 (26)	74.0 (88)	27.9 (12)	0.93 (0.02)
Maximum	†	11.2 (16)	62.2 (23)		0.0 (0)	13.5 (16)	72.1 (31)	
	Revised SRSW Security Level Recommendation <sup>b</sup>				Revised SRSW Security Level Recommendation <sup>b</sup>			
	Revised SRSW Security Level Recommendation <sup>b</sup>			Wald $\chi^2$ $\gamma$ (ASE)	Revised SRSW Security Level Recommendation <sup>b</sup>			Wald $\chi^2$ $\gamma$ (ASE)
	Minimum % (n)	Medium % (n)	Maximum % (n)		Minimum % (n)	Medium % (n)	Maximum % (n)	
OSL placement								
Minimum	74.2 (95)	21.7 (34)	0.0 (0)	161.8***	72.7 (72)	17.2 (23)	0.0 (0)	193.4***
Medium	25.0 (32)	64.3 (101)	41.0 (16)	0.86 (0.03)	27.3 (27)	70.9 (95)	23.7 (9)	0.91 (0.02)
Maximum	†	14.0 (22)	59.0 (23)		0.0 (0)	11.9 (16)	76.3 (29)	

*Note.* Column totals may not sum to 100% due to rounding. OSL placement refers to the actual security level placement post-SRSW assessment. Security reviews where the original SRSW total score fell within the 10% discretionary ranges were removed from consideration as these would not be considered decision discrepancies. Gamma ( $\gamma$ ) values of less than .30 represent a weak effect, values between .31 and .60 represent a moderate effect, and values greater than .60 represent a strong effect (Healey & Prus, 2015). <sup>a</sup> The numbers in this table are reflective of 319 security reviews for non-Indigenous women and 271 security reviews for Indigenous women. <sup>b</sup> These numbers are reflective of 324 security reviews for non-Indigenous women and 271 reviews for Indigenous women. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . † Numbers suppressed due to frequency less than five.

Results showed that as security level recommendations increased to maximum on both the original and revised SRSW ratings, there was a notable increase in the proportion of women also committing institutional offences (see Table 9 for further detail). Notably, the difference between the original and revised SRSW security level ratings' predictive validity of minor offences was not statistically significant,  $\chi^2(1) = 0.04, p = .834$ . However, there was a statistically significant decrease in the predictive ability of the revised SRSW ratings regarding serious institutional offences compared to the original SRSW ratings,  $\chi^2(1) = 5.05, p = .025$ . Nevertheless, revised SRSW security level recommendations still predicted serious institutional offences with moderate accuracy.

Table 9

*Rates of misconduct by recommended security level*

Original SRSW Security Level Recommendation	Minor Institutional Offence		Serious Institutional Offence	
	% (n)	HR	% (n)	HR
Minimum	21.1 (47)	-	7.2 (16)	-
Medium	45.4 (98)	2.62***	17.6 (38)	2.60**
Maximum	61.7 (37)	4.65***	45.0 (27)	8.44***
<i>Model fit</i>				
	Wald $\chi^2$ (df)		48.0 (2)***	
	AUC		0.70	
Revised SRSW Security Level Recommendation				
	% (n)	HR	% (n)	HR
Minimum	17.0 (39)	-	7.3 (15)	-
Medium	47.1 (113)	2.89***	18.8 (45)	2.50**
Maximum	55.6 (30)	4.19***	38.9 (21)	7.16***
<i>Model fit</i>				
	Wald $\chi^2$ (df)		34.7 (2)***	
	AUC		0.67	

*Note.* The percentages and AUC statistics associated with this table do not control for time at risk. Area Under the Curve (AUC) values of .56, .64, and .71 are considered small, moderate, and large effect sizes, respectively. df = degrees of freedom; HR = hazard ratio; \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

With regard to discretionary releases, a clear relationship emerges with both the original and revised SRSW security level ratings being moderately-to-strongly associated with discretionary release. (See Table 10.) As SRSW ratings increase, the likelihood of discretionary release decreases. The difference in predicative accuracy between the original SRSW and the revised SRSW was not statistically significant,  $\chi^2(1) = 2.59, p = .107$ .

Table 10

*Rates of discretionary release by original and revised SRSW security level recommendations*

	Original SRSW Security	Revised SRSW Security
	Level Recommendation	Level Recommendation
	% (n)	% (n)
Minimum	66.9 (123)	65.3 (115)
Medium	32.5 (54)	34.5 (61)
Maximum	†	†
Wald $\chi^2$ (df)	72.4 (2)***	58.5 (2)***
AUC	0.72	0.70

*Note.* SRSW security level recommendation represents the closest assessment prior to release. Area Under the Curve (AUC) values of .56, .64, and .71 are considered small, moderate, and large effect sizes, respectively. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

As shown in Table 11, the original and revised SRSW security level recommendations weakly predicted returns to custody for any reason. In both cases, the capacity to discriminate between minimum and medium security level recommendations to predict revocations after release was minimal. The difference in predicative accuracy between the original SRSW and the revised SRSW was not statistically significant,  $\chi^2(1) = 0.24, p = .624$ .

Table 11

*Rates of returns to custody by original and revised SRSW security level recommendations*

Original SRSW Security Level Recommendation	% (n)	HR
Minimum	34.8 (64)	-
Medium	39.2 (65)	1.39 <sup>ns</sup>
Maximum	46.7 (21)	2.02**
<i>Model fit</i>		
	Wald $\chi^2$ (df)	8.7(2)*
	AUC	0.54
Revised SRSW Security Level Recommendation		
Minimum	33.5 (59)	-
Medium	40.7 (72)	1.53*
Maximum	45.2 (19)	1.92*
<i>Model fit</i>		
	Wald $\chi^2$ (df)	8.7(2)*
	AUC	0.55

*Note.* The percentages and AUC statistics associated with this table do not control for time at risk. Area Under the Curve (AUC) values of .56, .64, and .71 are considered small, moderate, and large effect sizes, respectively. df = degrees of freedom; HR = hazard ratio; ns = not significant, \* p < .05, \*\* p < .01, \*\*\* p < .001

## Summary of Findings

Overall, the results of the current research study indicate that with the revision to the SRSW assessment tool eliminating the segregation item the measure remains reliable and valid. This is not necessarily surprising, given how infrequently women receive the highest weight of the item, representing three or more segregation placements during the review period. Consequently, the removal of the segregation item would not have drastically changed the majority of women's total SRSW scores and security level recommendations. The proportion of women recommended for minimum, medium, or maximum security did not significantly differ by Indigenous identity. Further similar proportions of women would be allocated to the various security levels for both the original version of the SRSW and the revised tool. The majority of Indigenous and non-Indigenous women were recommended for minimum or medium security.

The reliability of the revised SRSW assessment tool was acceptable and generally comparable to that of the original SRSW assessment tool. Item-to-total correlations were weak to moderate, although there was a slight decrease in internal consistency between the original and revised SRSW items. This was not necessarily surprising since internal consistency estimates are dependent on the number of items included in the scale (Cortina, 1993).

Finally, the revised SRSW security level recommendations were predictive of a wide variety of offender outcomes. While it is not known whether the caseworker recommendation and OSL placement would remain the same with the revised SRSW security level recommendations available to CSC staff, they were highly correlated with each other. Being recommended for higher security level placements was moderately associated with an increased likelihood of institutional offences (minor and serious), moderately-to-strongly associated with non-discretionary release, and weakly associated with returns to federal custody for any reason. Comparisons in the predictive accuracy of the revised SRSW security level recommendations to the original SRSW security level recommendations revealed only one difference, the revised SRSW security level recommendations were less predictive compared to the original SRSW security level recommendations with regard to serious charges. However, the magnitude of the association remained in the moderate range. Otherwise, the predictive accuracy of the revised SRSW assessment tool was comparable to the original version.

## **Future Directions**

While the results of the current research study are promising, future research should ensure the assessment tool remains valid when the revised SRSW is implemented in practice. It is still unclear how correctional practices will change with the elimination of administrative segregation (e.g., how will correctional staff change how they deal with situations that currently result in administrative segregation placements? How will these changes affect other items within the SRSW assessment tool?). It will be a number of years before these changes in correctional practice are known and it may be necessary to reweight the existing SRSW items and/or explore the possibility of adding new items to the assessment tool at that time.

## **Conclusion**

The SRSW remains reliable and valid for use with Indigenous and non-Indigenous women with the removal of the segregation-related item. The SRSW security level recommendations allocates women to appropriate security placements, with similar proportions of Indigenous and non-Indigenous women recommended for each security level. The proportion of women recommended for various security levels did not significantly differ with the elimination of the segregation item of the SRSW. Although continued use of the tool with the segregation item eliminated is merited, future research should explore the effect of the elimination of administrative segregation from correctional practice and how this may affect the accuracy of security reviews.

## References

- Blanchette, K., & Taylor, K. (2005). *Development and field test of a gender-informed security reclassification scale for women offenders* (Report R-167). Ottawa, Ontario: Correctional Service Canada.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98-104.
- Farr, K. A. (2000). Classification for female inmates: Moving forward. *Crime & Delinquency*, 46(1), 3-17.
- Gobeil, R. (2008). *Revalidation of the Security Reclassification Scale for Women (SRSW)*. (Report R-191). Ottawa, Ontario: Correctional Service Canada.
- Gobeil, R., & Blanchette, K. (2007). Revalidation of a gender-informed security reclassification scale for women inmates. *Journal of Contemporary Criminal Justice*, 23 (4), 296-309. doi: 10.1177/1043986207309411
- Healey, J. F., & Prus, S. G. (2014). *Statistics: A tool for social research (Third Canadian Edition)*. Nelson College Indigenous.
- Kline, P. (2013). *Handbook of psychological testing*. New York: Routledge.
- McConnell, A. (2012). *A Re-validation of the Security Reclassification Scale (SRSW) among federal women offenders for a period of at least six months*. (Research Snippet RS-12-05). Ottawa, Ontario: Correctional Service of Canada.
- Motiuk, L.L. (1997). Classification for correctional programming: The Offender Intake Assessment (OIA) process. *Forum on Corrections Research*, 9(1), 18-22.
- Rice, M.E., & Harris, G.T. (2005). Comparing effect sizes in follow-up studies: ROC Area, Cohen's  $d$ , and  $r$ . *Law and Human Behavior*, 29, 615-620. doi: 10.1007/s10979-005-6832-7
- Thompson, J., McConnell, A., & Paquin-Marseille, L. (2013). *The Security Reclassification Scale (SRSW) for shorter review periods among federal women offenders*. (Research Report R-286). Ottawa, Ontario: Correctional Service of Canada.
- Thompson, J., & Wardrop, K. (2018). *An assessment of the reliability and validity of the security reclassification scale for women (SRSW)*. (Research Report R-412). Ottawa, Ontario:

Correctional Service of Canada.

Yadav, M. K., & Agarwal, G. G. (2013). On estimation of standard error of intra-class correlation coefficient in unbalanced nested designs. *Communications in Statistics-Theory and Methods*, 42(1), 88-97. doi: 10.1080/03610926.2011.575513

Zumbo, B. D., Gadermann, A. M., & Zeisser, C. (2007). Ordinal versions of coefficients alpha and theta for likert rating scales. *Journal of Modern Applied Statistical Methods*, 6(1), 21-29. doi: 10.22237/jmasm/1177992180

## Appendix A: Supplemental Information of the Security Reclassification Scale for Women

Table A1

*Original Security Reclassification Scale for Women (SRSW) Items and Weights*

Item	Weight
Correctional plan: Motivation/progress	3.20
Maintains regular positive family contact	1.00
Number of convictions for serious disciplinary offences	4.40
Number of recorded incidents during the review period	3.50
Pay level during the review period	1.00
Number of times offender was placed in involuntary segregation for being a danger to others or the institution	5.35
Total number of successful ETAs during the review period	1.15
Ever UAL from work release, temporary absence, or supervision	1.20
CRS Incident History	1.60

*Note.* See Blanchette and Taylor (2005) for detailed scale development information.

*Figure A1.* Range of possible original SRSW scores, including cut-offs for each security recommendation

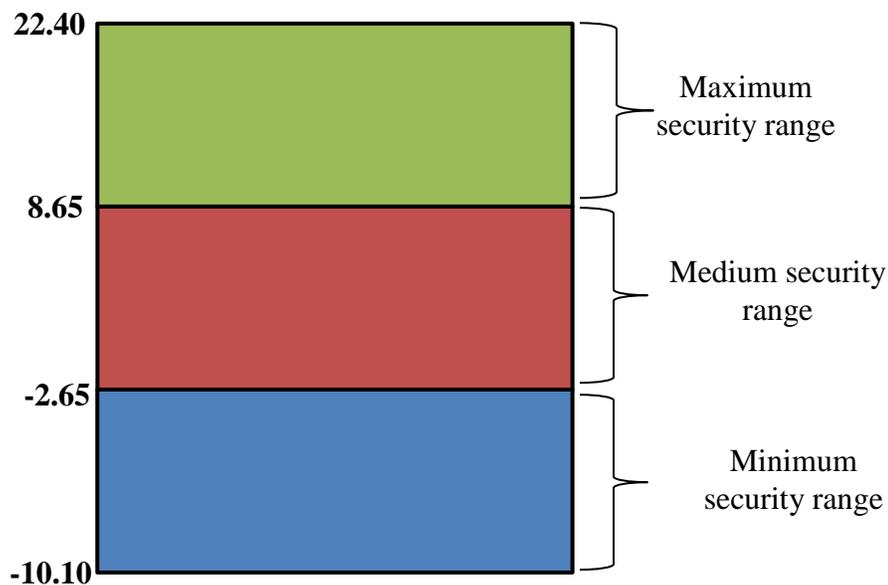


Table A2

*Original SRSW cut-points*

<b>Level</b>	<b>Cut-points</b>	<b>Range</b>	<b>Proportion of total scale</b>
Maximum	8.65 to 22.4	13.75	$(13.75/32.50)*100 = 42.31\%$
Medium	-2.65 to 8.65	11.30	$(11.30/32.50)*100 = 34.77\%$
Minimum	-10.10 to -2.65	7.45	$(7.45/32.50)*100 = 22.92\%$

*Note.* The range of the original SRSW is 32.50 points, ranging between -9.00 and 17.05.

Table A3

*Revised SRSW cut-points*

<b>Level</b>	<b>Cut-points</b>	<b>Range</b>	<b>Proportion of total scale (check)</b>
Maximum	+6.03 to +17.05	11.02	$(11.02/26.05)*100 = 42.30\%$
Medium	-3.03 to +6.03	9.06	$(9.06/26.05)*100 = 34.78\%$
Minimum	-9.00 to -3.03	5.97	$(5.97/26.05)*100 = 22.92\%$

*Note.* The range of the revised SRSW is 26.05 points.

Table A4

*Revised SRSW discretionary ranges*

<b>Recommended level</b>	<b>Change</b>	<b>Cut-Point</b>	<b>To</b>
Maximum	Maximum-to-Medium	+6.03	$6.03 - 10\% = +5.43$
Medium	Medium-to-Maximum	+6.03	$6.03 + 10\% = +6.63$
Minimum	Minimum-to-Medium	-3.03	$-3.03 - 10\% = -2.73$
Medium	Medium-to-Minimum	-3.03	$-3.03 + 10\% = -3.33$

## Appendix B: Supplemental Results

Table B1

*Differences in original SRSW security level recommendations and revised SRSW security level recommendations by Indigenous identity and security level recommendation*

	Non-Indigenous Women			Indigenous Women		
	Original SRSW	Revised SRSW	Fisher's	Original SRSW	Revised SRSW	Fisher's
	Security Level	Security Level		Security Level	Security Level	
	Recommendations	Recommendations	Exact	Recommendations	Recommendations	Exact
% ( <i>n</i> )	% ( <i>n</i> )		% ( <i>n</i> )	% ( <i>n</i> )		
Minimum	40.7 (143)	38.5 (135)	0.14 <sup>ns</sup>	38.4 (113)	36.1 (106)	0.33 <sup>ns</sup>
Medium	45.0 (158)	48.4 (170)	0.02 <sup>ns</sup>	45.2 (133)	49.7 (146)	0.09 <sup>ns</sup>
Maximum	14.3 (50)	13.1 (46)	0.20 <sup>ns</sup>	16.3 (48)	14.3 (42)	0.30 <sup>ns</sup>

<sup>ns</sup> non-significant, \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table B2

*Polychoric correlation matrix of revised SRSW items by Indigenous identity*

		Non-Indigenous Women							
		1	2	3	4	5	6	7	8
1	1								
2	0.28	1							
3	0.28	0.70	1						
4	-0.08	0.02	-0.13	1					
5	0.31	0.19	0.11	-0.04	1				
6	0.38	0.24	0.16	0.20	0.23	1			
7	0.06	-0.05	-0.10	-0.01	0.30	0.14	1		
8	0.53	-0.03	0.02	-0.06	0.34	0.23	0.16	1	

		Indigenous Women							
		1	2	3	4	5	6	7	8
1	1								
2	0.27	1							
3	0.34	0.53	1						
4	0.15	0.07	0.14	1					
5	0.20	0.21	0.25	0.37	1				
6	0.44	0.30	0.30	0.22	0.29	1			
7	-0.09	0.04	-0.07	0.23	0.19	-0.08	1		
8	0.54	0.27	0.13	0.17	0.19	0.28	-0.06	1	

1 = Correctional plan: program motivation/progress; 2 = Number of convictions for serious disciplinary offences; 3 = Number of recorded incidents during the review period; 4 = Total number of successful ETAs; 5 = CRS Incident History; 6 = Pay Level; 7 = Ever UAL from work release, temporary absence, or supervision; 8 = Maintains regular positive family contact.