

# Development and validation of a Security Reclassification Scale for women

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**C**lassification of offender populations is one of the most important functions of any correctional agency. Objective security classification systems are needed to ensure that excessive controls are not imposed on offenders, to help direct the use of limited resources and generate accurate information for long-term accommodation planning. Security classification provides corrections officials with both a practical and legal framework to address problematic inmate behaviour, to establish intervention strategies, and to maximize the management potential of correctional institutions. Importantly, this must all be achieved within a legislative framework that mandates the **least restrictive measures of confinement** for offenders.

**T**here are two principal ways of aggregating information to make a classification decision: actuarial (sometimes called the 'statistical' or 'mechanical' method), and clinical. The actuarial method grounds decision-making in statistical relationships<sup>2</sup>. It involves formal, objective procedures to combine and weight factors that render a score and recommendation for decision. Relevant variables are selected and mathematically combined and weighted such that their statistical association with the criterion of interest is maximized<sup>3,4</sup>. The weighting of factors is performed according to a set of objective, pre-defined criteria that do not vary as a function of the decision-maker. Thus, clear guidelines are established a priori in terms of what information should be collected, how it should be collected, where it should be collected from, and lastly, how it should be combined.

The clinical method relies mostly on professional judgement that is based on informal, subjective techniques, sometimes including case conferencing strategies. In general, there are no strict pre-defined regulations governing what information should be considered, how it should be measured, which information sources should be used, or how the information should be combined and weighted. With this method, the assessor's professional judgement determines how best to select, combine and weight the information. Thus, the rules vary across decision-makers as well as the individual about whom the decision is being made<sup>5</sup>.

Actuarial tools have demonstrated superiority over clinical judgment in accomplishing classification

goals; in general, they are both more liberal and more accurate than the clinical method<sup>6</sup>. Unfortunately, the objective classification measures currently in use for women inmates (in Canada and abroad) have invariably been developed for men. This, despite evidence to suggest that there may be gender-specific risk factors for women, and that measures derived from samples of male offenders may overclassify women<sup>7,8</sup>.

Amid calls for the cessation of applying male-based measures to women offenders<sup>9,10,11</sup>, Correctional Service of Canada's Deputy Commissioner for Women commissioned the development of a gender-specific security reclassification scheme. Over a two-year time frame (1998-2000), the Research Branch developed an empirically derived, objective Security Reclassification Scale for Women (SRSW).

In brief, the SRSW was created as follows: A 'candidate' pool of predictor variables ( $n = 176$ ) was created based on: 1) a review of research on the risk factors of female offenders, 2) consultation with the researchers involved in creation of prior classification scales, and 3) consultation with administrators and field staff working with federally sentenced women. These 176 variables included some historical risk factors, but were predominantly composed of dynamic behavioural factors such as program progress and motivation, drug and alcohol use, recent institutional behaviour (e.g., charges and incidents), social support, marital/family adjustment, and so on.

The 'candidate' predictor variables were examined for a sample comprised of 172 women for whom offender security level (OSL) decisions were available. A total of 285 OSL decisions were coded based on the sample of 172 women. The number of decisions coded per woman ranged from 1 to 5 decisions per person. The security review is conducted periodically, and has the potential to confirm, raise or lower an offender's security classification. For the development sample, the security review period covered an average of 10 months ( $SD = 9$ ). Of the 285 decisions sampled, 54% resulted in lowered classifications, 25% resulted in a raise in security level, and 21% did not change.

Univariate analyses were applied to the initial pool of predictors. Examination of the univariate

correlations between the variables and the OSL decision rating (rated from minimum = 1 to maximum = 3) reduced the pool of 'candidate' predictors from 176 to 39; those that correlated with the decision rating beyond ( $p < .01$ ) were retained. The second step in reduction of the initial pool was exclusion of variables with skewed distributions: those variables with ceiling or floor effects that would not be useful in further analyses. The remaining variables were entered into a stepwise (forward) regression analysis, resulting in a model that included nine variables that accounted for 57% of the variance in OSL decisions.

After the nine predictors were selected, a simple summation prediction model<sup>12</sup> was applied to determine the optimal item weights for scoring the scale. To determine cut-off values for the security reclassification scores (minimum, medium, or maximum), the sample was rank ordered with respect to their scores on the reclassification scale. Cut-off values were chosen to maximize concordance with the actual security level decision made by staff. The resultant scale, the SRSW, includes the following nine weighted variables:

1. Correctional plan: program motivation.
2. Maintains regular positive family contact.
3. Number of convictions for serious disciplinary offences *during the review period*.
4. Number of recorded incidents *during the review period*.
5. History of escape or unlawfully at large from work release, temporary absences or community supervision.
6. Pay level *during the review period*.
7. Number of times offender was placed in involuntary segregation for being a danger to others or the institution *during the review period*.
8. Total number of successful escorted temporary absences (ETAs) *during the review period*.
9. Custody Rating Scale Incident History.

The SRSW has an approximate 30-point scoring range, with higher scores representing higher assessed risk and resulting in a higher security rating recommendation.

Following the scale development, the focus shifted to validation. Using an independent sample of women's security review decisions (automated data extracted from the Offender Management System), researchers examined various aspects of reliability and validity of the SRSW with separate analyses for Aboriginal women and women serving life

sentences. Overall, results provided strong support for use of the scale to guide security review decisions for all federally-sentenced women inmates.

The final phase of the project involved extensive practical application of the scale via a national field test. Staff members from each of the women's facilities (as well as the co-located units, regional psychiatric centre, and regional reception centre) were solicited to participate in the field testing, and received comprehensive training in May 2000, and booster training in March 2002. Data collection for the field test began in July 2000, and continued until June 2003. Over that three-year period, every time an offender security level (OSL) review was completed for a federal woman inmate, staff were asked to complete the SRSW as well. Our data show virtually 100% compliance by field staff, rendering 580 completed reclassification scales over the course of the field test.

Preliminary results of the field test are very promising. The SRSW has demonstrated good internal consistency, with  $\alpha = .69$ , and a mean item-to-total correlation of .50. This suggests that the scale items are appropriately converging on a single underlying dimension. Our results also revealed that the scale shows excellent convergent validity; correlations with independent assessments of overall need, risk, and reintegration potential were .32, .21, and -.37, respectively. All were statistically significant at  $p < .0001$ . Simple Pearson correlations, partialling out time at risk, between SRSW scores and number of incidents perpetrated were also highly statistically significant ( $p < .0001$ ). Specifically, our results showed simple correlations of  $r = .33$  and  $r = .32$  for involvement (perpetrator) in major and minor institutional incidents, respectively.

Analyses examining predictive validity supported the results of the correlation coefficients. The Receiver Operating Characteristic (ROC)<sup>13</sup> was used to calculate Area Under the Curve (AUC) statistic. The AUC, which can vary between 0 and 1, is a measure of the ability of the independent variable (in this case, the SRSW) to predict the outcome (in this case, involvement in institutional incidents). An AUC of 1 would indicate a perfect ability to predict, while an AUC of .50 or less would suggest that the scale has no predictive power. Our analyses revealed AUC values of .73 for both the prediction of perpetrating 'major' and the prediction of perpetrating 'minor' institutional incidents.

It is important to highlight that analyses also examined the psychometric properties of the OSL classifications **as they are currently derived** with the structured clinical method. Although OSL ratings derived by the clinical method also exhibited good

convergent and predictive validity, *the SRSW-derived classifications equaled or outperformed the traditional method in all of the aforementioned analyses*. In addition to being more accurate than the current method of classification, the SRSW was more liberal. More specifically, relative to the OSL recommendations derived by the clinical method, the SRSW made more

classification recommendations to minimum-security and fewer to maximum-security.

We are extremely proud of these results; they lend additional credence to CSC as a world leader in state-of-the-art correctional research and practice. It is anticipated that the SRSW will be implemented nationally this calendar year. ■

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