Women Offenders who Engage in Self-harm: A Comparative Investigation	
Cherami Wichmann	
Ralph Serin	
Jeffrey Abracen	
Research Branch	
Correctional Service Canada	
February 2002	
	_

#### **EXECUTIVE SUMMARY**

A descriptive study was untertaken of women in federal custody who engage in self-harm (i.e., suicide attempts, self-injury and self-mutilation). A sample of 78 women offenders who engaged in self-harm while in federal custody were compared to a matched group of 77 women who had not engaged in self-harm. The comparison group was matched with the target group on admission year, age at admission, sentence length and offence type. All data was gathered via automated databases operated by the Correctional Service of Canada. Results indicated that among those women who exhibited self-harm, there were a host of adjustment difficulties (e.g., social cognitive problems, substance abuse, psychiatric difficulties, dysfunctional family relationships) that were also present. While coping deficits may be related to the expression of suicidal behaviour in women offenders, their violent behaviour was not exclusively self-directed. These difficulties were not apparent in the comparison group. For example, the self-harm group was significantly more likely to have been involved in institutional incidents, most notably for violence, substance abuse, and discipline problems. These findings are comparable to those reported for male offenders.

# **TABLE OF CONTENTS**

EXECUTIVE SUMMARY	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	iv
LIST OF FIGURES	iv
INTRODUCTION	1
Causes of self-harm  Driving concerns  Risk factors  The process of suicidal behaviour	2 2
METHOD	5
Sources of information	
RESULTS	8
Suicide risk at intake Criminal history Static and dynamic risk Mental health and adjustment at intake Current institutional adjustment	8 10 11
DISCUSSION	
REFERENCES	15
APPENDIX A DESCRIPTION OF THE VARIABLES USED IN THE SUICIDE ANALYSES	17

# LIST OF TABLES

Table 1. Demographic and Sentence Related Characteristics
Table 2. Indicators of the Suicide Potential Scale by Group8
Table 3. Static Risk and Dynamic Factors by Group11
Table 4. Current Institutional Adjustment by Group13
LIST OF FIGURES
Figure 1. Criminal History Variables by Group9
Figure 2. Mental Health Adjustment Variables by Group12

#### INTRODUCTION

A host of variables associated with self-harm (such as, substance abuse, anxiety and depressive disorders) have been found to be highly prevalent in Canadian federal prison populations for both men and women (Blanchette, 1996; Motiuk & Porporino, 1991). The population of women offenders, then, is already a group "at risk" for various difficulties. These factors, in addition to characteristics of the prison environment, may increase the likelihood of self-harm occurring. The present investigation is intended to focus on characteristics of women offenders who engage in self-injurious behaviours. It is however, descriptive and will not directly investigate causal factors contributing to self-harm behaviour in women offenders.

#### Causes of self-harm

There have been many hypothesized causes of self-harm among women offenders which inform the factors to consider in this research. Chesney-Lind (1997), reviewing the literature on the subject, suggested that many young women who eventually come into contact with the criminal justice system are victims of physical and/or sexual victimization. Such data have been corroborated with reference to adult female criminal behaviour (Snell & Morton, 1994). Nonetheless, while victimization experiences appear to play a role in the onset of criminal offending, they do not appear to be associated with recidivism (for a discussion see Blanchette, 2001).

Risk for suicide may be a particularly salient issue for women offenders. More, generally, feelings of loneliness and isolation as well as lack of social support are known risk factors for suicidal behaviour, attempts and completions (Plutchik, 2000). This may be especially true for women offenders. Women in prison show more frequent mental health problems than women in general, men in general and incarcerated men (Blanchette, 1996 & 1997; Loucks & Zamble, 1994). In fact, some estimates place rates of suicidal behaviour among federal women offenders at approximately 50% of the population (Loucks & Zamble, 1994).

### **Driving concerns**

#### The Problem of Definition

For women especially, the definition of suicide attempts, self-injury and self-mutilation are intertwined, and difficult to differentiate. However, it is hypothesized that these concepts are distinct, with different etiologies and purpose. In general terms, suicide attempts are more lethal and have the primary goal of ending pain and suffering. Self-injury, on the other hand, is seen as a coping mechanism to relieve stress and gain control over one's environment.

The issue of differentiating suicide attempts and self-injury has been a source of difficulty for researchers (Cookson, 1977; Farmer, Felthous, & Holzer, 1996). Clearly there is a need to address these shortcomings in the literature; however, it is beyond the scope of the current study to attempt to differentiate self-injurious behaviours from suicidal ones. In particular, post-incident interviews would be required to determine motivation and other proximal factors. This study utilizes only existing file information.

### Characteristics of women who engage in self-harm

Cookson (1977) examined the characteristics of women who engaged in self-injury while in custody in England in comparison to those who did not. She reported that women who engaged in self-injury were younger, had longer sentences for more violent offences and higher scores on a measure of hostility than the women who did not engage in this form of behaviour.

#### Risk factors

### **Previous Attempts**

It has been estimated that almost half of all women inmates have made a previous suicide attempt (Blanchette, 1997b; Cullen, 1985). Further, the percentage would likely be much higher if other forms of self-harm were considered.

Daigle, Alarie, and Lefebvre (2000) sought to assess the magnitude of the problem of suicide for incarcerated women in provincial and federal custody in Quebec. Of the more than 60 women approached, 34 women who had attempted suicide at least once were interviewed and completed measures of attempt severity and suicide risk potential. These women reported an average of three suicide attempts but the majority had made at least two attempts; however, few of these acts had occurred in custody. The severity of the women's most recent attempt was assessed as moderate (less than a 50-50 probability of fatality), however almost *one third* of their attempts were rated as being high severity. Such findings, in addition to speculation that self-harm can escalate in severity (and perhaps frequency) within the prison environment, suggest that a history of previous attempts may act as a risk factor for subsequent self-harm.

Daigle et al. (2000) also noted that suicide risk was assessed as fairly high for the overall sample, with women in provincial custody having the highest scores. They noted that based on these scores almost 40% of the women should have been referred to a clinician for prevention/intervention.

Notably, risk was higher for women who had a history of suicide attempts. These findings support previous research with federal male offenders (Wichmann, Serin & Motiuk, 2001). Such findings raise the question of whether self-harm by women offenders may be more similar in etiology and meaning to that of men offenders than to women in the general population. Wichmann et al. (2001) present data that indicates suicide attempts by male offenders were associated with internalizing as well as externalizing behaviours and poor institutional adjustment. On the other hand, Heney (1990) views self-injurious behaviour as a coping strategy to deal with past abuse, and a means of gaining control over the woman's environment. To support her position, Heney considered case studies, noting that there appeared to be outbreaks of self-injurious behaviours, often in response to heightened levels of stress in the prison environment. This research was conducted in order to investigate the behavioural

This number is higher than that generally reported by men in Canada (Bland, Newman, Dyck & Orn, 1990).

correlates of self-harm by women offenders so that these different perspectives might be evaluated.

It is posited that self-harm should be conceptualized as a mental health issue rather than one strictly of security. In support of this position, Heney (1990) who interviewed staff and inmates at Kingston Prison for Women regarding injury response, injury reduction and suicide identification, concluded that to reduce the incidence of self-injury, the behaviours must be redefined as a mental health rather than security issue. Wichmann et al (2001) also commented on the relationship between mental health and suicidal behaviours by male offenders.

### The process of suicidal behaviour

As with the prior studies of suicidal behaviours by male offenders, the present investigation was conceptualized within a process framework. Suicidal ideation and thus offenders' risk for engaging in suicidal behaviour fluctuates in response to a range of situations and experiences. The process model of Heikkien and colleagues (Heikkinen, Aro, & Lönnqvist, 1993) was the model chosen to frame the current program of research with women offenders. Subsequent research will endeavour to consider static and dynamic risk factors, vulnerability and protective factors, and precipitating events.

#### **METHOD**

### Sources of information

All variables used in this study were taken from a database of offender information maintained by the Correctional Service of Canada.

### Offender Management System: Offence Information and Incident Reports

Information on the offender's current offence, sentence length and security level at intake was taken from an offence database maintained by CSC. Suicide attempts, self-injury and other incidents that occurred within the institution were identified through the use of incident reports logged by correctional staff in the institution. These reports are completed for many different types of events (for example, causing a disturbance, assaulting another offender, being assaulted, etc.).

Incident variables coded from this database included: self-harm (all suicide and self-injury); committing violence (murder, assault, hostage taking, fighting); escape-related incidents (escape from facility, fail to return, escape escort); possession of and receiving/transporting contraband; victimization (victim of attempted murder, murder, assaulted, fights, hostage, victim of disturbance or discipline problems); involved in major or minor disturbance; involved with banned substances (use or possession); discipline problems; requests for protective custody; and other incidents (such as, fire, damage government property, walk-away).

### Intake Assessment

Case-specific information was retrieved from the Offender Intake Assessment (OIA) system (Motiuk, 1997). Briefly, comprehensive information was collected regarding each offender's criminal and mental health history, social situation, education, and other factors relevant to determining criminal risk and identifying offender needs. Data regarding the mental health, psychological functioning, and case risk and needs of offenders at intake was derived from the Case Needs Identification and Analysis (CNIA) portion of OIA.

From this database specific variables were targeted, and through statistical analyses, were aggregated to create six factors. Importantly, these empirically derived factors reflected dimensions identified in previous research as important to the assessment of suicide (Polvi, 1997; see Appendix A for indicator descriptions). These factors were:

- Externalizing and Social Cognitive Problems (4 indicators): Low selfawareness and empathy problems, social problem solving, impulsivity and anger.
- Substance Abuse (2 indicators): Alcohol and drug abuse problems.
- Internalizing and Victimized with Psychiatric Problems (3 indicators): Social isolation and internalization, victimization, and psychiatric problems.
- **Dysfunctional Family Relationships (3 indicators):** Predatory behaviour, poor social support, and having dysfunctional family relationships.
- Lack of Education and Cognitive Functioning Problems (2 indicators).
- **High Criminal Risk (5 indicators):** Lack of community functioning, employment problems, discipline problems and previous adult and youth convictions.

# Sample selection

Any instances of self-injurious behaviour<sup>2</sup> by offenders, logged through incident reports on OMS, were examined. Those women who had engaged in self-harm, for whom intake information was available were included in the present sample (n = 78). Of these women 72 (92.3%) had been identified as having attempted suicide, and 14 (18.0%) had been identified as committing self-injurious behaviours.<sup>3</sup>

The sample included 155 federally sentenced women, in two groups: a target group of 78 women who had engaged in self-harm while in federal custody; and a comparison group of 77 women who had not. The comparison group was matched with the target group on admission year (before and after 1994), age at admission (under 30, above 30), sentence length (3 years or less, 4 to 9 years, and 10 years or more) and offence type (scheduled, non-scheduled). The majority of the women were unmarried (see

These include self-injury as well as suicidal behaviours.

Women may have committed both acts during their time incarcerated, so the proportions do not sum to 100%.

Table 1). There were some differences in the ethnic makeup of the groups  $(X^2(3) = 18.50, p < .001)$ : more of the women in the target group were of Aboriginal descent and fewer were Black. Further, there were no women from other ethnic groups in the target sample. This is an interesting finding that should be addressed in future research.

Because sentence-related characteristics were used to match the groups, there were no between-group differences for sentence length, or whether the offenders had committed scheduled or non-scheduled offences. However, it is notable that more of the women who had engaged in self-harm had committed violent offences currently.

 Table 1.
 Demographic and Sentence Related Characteristics

Variables	Comparison	Self-Harm
Demographics		
Unmarried	56.9%	64.1%
Race***		
Caucasian	56.0%	61.5%
Aboriginal	21.3%	37.2%
Black	12.0%	1.3%
Other	10.7%	0.0%
Sentence Characteristics		
Sentence Length		
4 years or less	65.0%	64.1%
5 to 9 years	19.5%	20.5%
10+ years	2.6%	5.1%
Life	13.0%	10.3%
Current Offence		
Schedule 1 or 2	90.9%	91.0%
Unscheduled	9.1%	9.0%
Committed Violence	32.0%	63.5%

#### **RESULTS**

### Suicide risk at intake

Chi-square analyses were run to determine whether there were indicators more frequently endorsed for attempters than for non-attempters. These analyses indicated that women in the self-harm group were more likely to have been endorsed for three of the nine indicators: may be suicidal ( $X^2(1) = 4.37$ , p < .05); has made a previous suicide attempt ( $X^2(1) = 22.06$ , p < .0001); has undergone a recent psychological or psychiatric intervention ( $X^2(1) = 14$ ;.11, p < .001; see Table 2). These findings suggest that there are characteristics, important to the assessment of longer-term suicide risk that can be reliably assessed during the routine intake process. These findings are very similar to those reported for men offenders.

Table 2. Indicators of the Suicide Potential Scale by Group

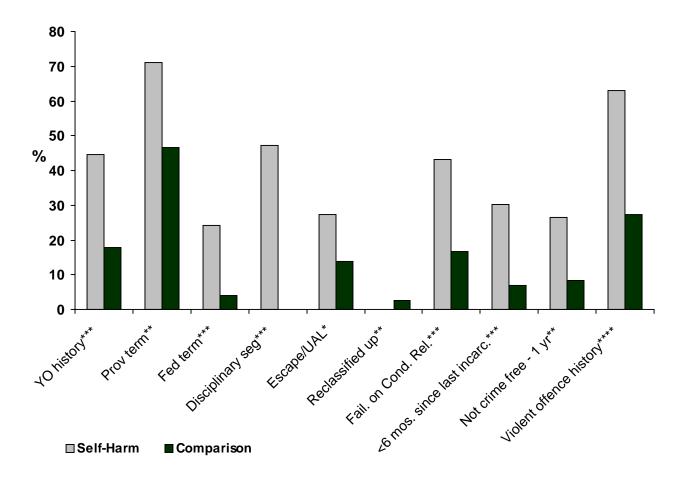
	Suicide History	Comparison	Self-Harm
1.	Inmate may be suicidal *	4.2%	14.3%
2.	Inmate has made previous suicide attempt ****	23.3%	62.0%
3.	Inmate has undergone recent psychological/psychiatric intervention ***	16.9%	46.4%
4.	Inmate has experienced recent loss of a relative/spouse	12.3%	14.3%
5.	Inmate is presently experiencing major problems (i.e., legal)	13.9%	18.6%
6.	Inmate is currently under influence of alcohol/drugs	6.9%	7.3%
7.	Inmate shows signs of depression	12.3%	17.7%
8.	Inmate has expressed suicidal ideation	4.2%	12.7%
9.	Inmate has a suicide plan	0.0%	1.4%

## **Criminal history**

Chi-square analyses for criminal history variables indicated that women who engaged in self-harm during their current sentence had a more extensive and serious criminal history than women that did not engage in self-harm in their present sentence. Women who harmed themselves were more likely to have a history of convictions as young offenders (44.6% vs. 17.8%;  $X^2(1) = 12.26$ , p < .001), to have been convicted of

previous provincial (71.2% vs. 46.6%;  $X^2(1) = 9.17$ , p < .01) and federal offences (24.3% vs. 4.1%;  $X^2(1) = 12.26$ , p < .001) than women who did not. Women who engaged in self-harm also had a history of problems with institutional adjustment including disciplinary segregation ( $X^2(1) = 14.21$ , p < .001), prior escape-related behaviours ( $X^2(1) = 4.20$ , p < .05) and reclassification to a higher level of security ( $X^2(1) = 9.93$ , p < .01). Further, these women were more likely to have difficulty remaining crime free ( $X^2(1) = 8.18$ , p < .01) and in the community ( $X^2(1) = 13.13$ , p < .001) than women who did not engage in self-harm.

Figure 1. Criminal History Variables by Group



Finally, women who engaged in self-harm were more likely to have been convicted of violent offences in the past ( $X^2(1) = 18.69$ , p < .0001) than women who did not engage in self-harm during their present term.

### Static and dynamic risk

Static criminal risk is not only related to increased risk of recidivism upon release, but also security placement. Instruments that have been specifically developed to determine appropriate security placement at admission and during an offender's sentence incorporate some items that are also related to static risk (Grant & Luciani, 1998). Dynamic risk refers to needs that if changed can influence correctional outcomes such as recidivism. Reductions in need level have been found to reflect improved outcomes (Motiuk & Brown, 1993)

Women who engaged in self-harm were more likely to be rated as high in overall static risk and less likely to be rated low than women who did not  $(X^2(2) = 28.32, p < .0001)$ . When overall needs level was examined, this pattern was repeated, with equally significant results  $(X^2(2) = 41.24, p < .0001)$ . Women who engaged in self-harm were much more likely to have been rated a high in needs and less likely to be rated low or even moderate needs than other women.

When specific needs were examined, women who engaged in self-harm were more likely to have considerable needs in five of seven of the domain areas relative to the comparison group: employment ( $X^2(1) = 4.36$ , p < .05); marital family ( $X^2(1) = 3.94$ , p < .05); substance abuse ( $X^2(1) = 9.99$ , p < .01); community functioning ( $X^2(1) = 4.02$ , p < .05); and personal emotional ( $X^2(1) = 17.62$ , p < .0001). Most differentiation was noted for personal and emotional and substance abuse areas.

Table 3. Static Risk and Dynamic Factors by Group

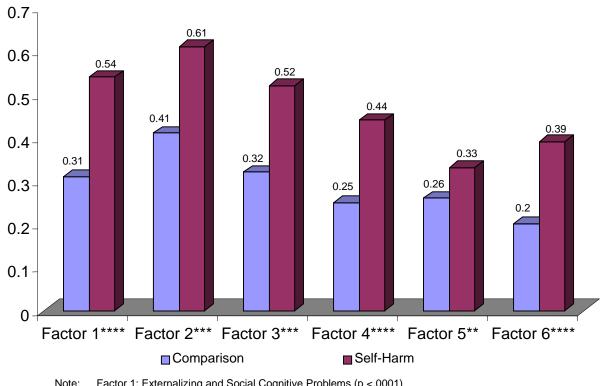
Static and Dynamic Risk	Comparison	Self-Harm
Static Risk ****		
Low	38.2%	10.3%
Medium	50.0%	43.6%
High	11.8%	46.2%
Overall Need Level ****		
Low	22.4%	2.6%
Medium	48.7%	18.0%
High	29.0%	79.5%
Risk-Need****		
Low-Low	17.1%	2.6%
High-High	9.2%	43.6%
<b>Dynamic Factor Domains</b>		
Employment *	20.8%	35.9%
Marital/family *	26.0%	41.0%
Associates	16.9%	29.5%
Substance abuse **	45.5%	70.5%
Community Functioning *	3.9%	12.8%
Personal/Emotional ***	45.5%	78.2%
Attitude	11.7%	14.1%

# Mental health and adjustment at intake

Next we sought to examine differences between women who did and did not engage in self-harm with respect to mental health and adjustment as assessed at intake (see Figure 3). Six t-tests were run; all were significant at p<.01 or higher. These analyses indicated that women who had engaged in self-harm displayed more externalizing behaviours (t(152) = -5.47, p<.0001), internalizing behaviours t(153) = -3.45, p<.001), substance abuse t(151) = -5.56, p<.001, dysfunctional family relationships

(t(144) = -4.24, p < .0001), cognitive and educational deficits (t(152) = -2.60, p = .01) and were higher in criminal risk than women (t(145) = -5.49, p<.0001) who did not engage in self-harm in their current sentence.

Figure 2. Mental Health Adjustment Variables by Group



Factor 1: Externalizing and Social Cognitive Problems (p <.0001)

Factor 2: Substance Abuse (p < .001)

Factor 3: Internalizing and Victimized with Psychiatric Problems (p <.001)

Factor 4: Dysfunctional Family Relationships (p <.0001)

Factor 5: Lack of Education and Cognitive Functioning Problems (p <.01)

Factor 6: High Criminal Risk (p < .0001)

# **Current institutional adjustment**

Finally, current institutional adjustment was assessed through an examination of incident reports and placement in segregation between admission and the target date. Chi square analyses revealed that, again, women who engaged in self-harm also had more difficulties in adjustment within the institution. Specifically, women who engaged in self-harm were more likely to have been placed in segregation in her present sentence ( $X^2(1) = 49.30$ , p < .0001). Further, these women were more likely to have

been involved in institutional incidents, most notably for violence  $(X^2(1) = 49.41, p < .0001)$ , substance abuse $(X^2(1) = 12.70, p < .001)$ , discipline problems $(X^2(1) = 30.31, p < .001)$  and involvement in a disturbance  $(X^2(1) = 13.32, p < .001)$ . However, these women were also more likely to have been victimized than their counterparts  $(X^2(1) = 15.30, p < .0001)$ .

Table 4. Current Institutional Adjustment by Group

Incidents	Comparison	Self-Harm
Commit Violence ****	16.9%	73.1%
Escape/UAL	3.9%	11.5%
Contraband Related **	14.3%	34.6%
Other Incidents ****	32.5%	71.8%
Victimized ****	10.4%	37.2%
Intelligence Related **	7.8%	25.6%
Involvement in Disturbance ***	3.9%	24.4%
Substance Related ***	6.5%	28.2%
Discipline Problems ***	10.4%	51.3%

#### DISCUSSION

Although this research was considered preliminary and essentially descriptive, several key findings are important to highlight. First, the findings are comparable to those reported for male offenders (Wichmann et al., 2001). This is not intended to suggest that there may not be gender differences regarding the etiology of suicidal behaviour, but that their expression in a correctional environment has similarities that should not be ignored. Second, for those women offenders who exhibited suicidal behaviour, there were a host of adjustment difficulties that were also prevalent. These difficulties were not apparent in a matched group of women offenders. It was clearly not the case that for the women offenders who exhibited suicidal behaviour, that this was unique in terms of adjustment difficulties. Again, while coping deficits may be related to the expression of suicidal behaviour in these women offenders, their violent behaviour was not exclusively self-directed. That is, for these women offenders, there was considerable evidence of violence against other inmates and staff.

Further research regarding additional components of the process model is warranted to gain a full appreciation of the role of suicidal behaviour in women offenders.

Nonetheless, this research is an important contribution in that it utilized objective data and incorporated a matched comparison group of women offenders. Several authors have recommended the importance of personal accounts of the women to better understand their motivation. Such research, in combination with systematic appraisals of proximal events may be instructive in determining the influence of gender in the expression of certain behaviours.

#### REFERENCES

- Blanchette, K. (1996). The relationship between criminal history, mental disorder, and recidivism among federally sentenced female offenders. Unpublished Masters Thesis, Ottawa, ON: Carleton University.
- Blanchette, K. (1997a). Maximum-security female and male federal offenders: A comparison. Research Report R-53. Ottawa, ON: Correctional Service of Canada.
- Blanchette, K. (1997b) *Risk and need among federally sentenced female offenders: A comparison of minimum, medium, and maximum-security inmates.* Research Report R-58. Ottawa, ON: Correctional Service of Canada.
- Blanchette, K. (2001). Classifying female offenders for effective intervention: Application of the case-based principles of risk and need. Unpublished Comprehensive Paper, Ottawa, ON: Carleton University.
- Chesney-Lind, M. (1997). *The female offender: Girls, women and crime*. London, UK: Sage Publication.
- Cookson, H. M. (1977). A survey of self-injury in a closed prison for women. *British Journal of Criminology*, *17*(4), 332-347.
- Cullen, J. E. (1985). Prediction and treatment of self-injury by female young offenders. In D.P. Farrington & R. Tarling (Eds.). *Prediction in Criminology*. Albany, NY: State University of New York Press.
- Farmer, K. A., Felthous, A. R., & Holzer, C. E. (1996). Medically serious suicide attempts in a jail with a suicide-prevention program. *Journal of Forensic Sciences*, 41, 240-246.
- Grant, B. A., & Luciani, F. (1998). Security classification using the custody rating scale. Research Report R-67. Ottawa, ON: Correctional Service of Canada.
- Heikkinen, M., Aro, H., & Lönnqvist, J. (1993). Life events and social support in suicide. *Suicide and Life-Threatening Behavior*, *23*, 343-358.
- Heney, J. (1990). Report on self-injurious behaviour in Kingston Prison for Women. Ottawa, ON: Correctional Service of Canada.
- Loucks, A. D., & Zamble, E. (1994). Some comparisons of female and male serious offenders. *Forum on Corrections Research*, *6*(1), 22-24.
- Motiuk, L. (1997). Classification for correctional programming: The Offender Intake Assessment (OIA) process. *Forum on Corrections Research* 9(1), 18-22.

- Motiuk, L. L., & Brown, S. L. (1993). *The validity of offender needs identification and analysis in community corrections*. Research Report R-34. Ottawa, ON: Correctional Service of Canada.
- Motiuk, L. L., & Porporino, F. J. (1991). The prevalence, nature and severity of mental health problems among federal male inmates in Canadian penitentiaries.

  Research Report R-24. Ottawa, ON: Correctional Service of Canada.
- Plutchik, R. (2000). Aggression, Violence, and Suicide. In R. W. Maris, A. L. Berman, & M. M. Silverman (Eds.). *Comprehensive textbook of suicidology*. (pp. 407-426). New York, NY: The Guilford Press.
- Polvi, N. H. (1997). *Prisoner suicide: A review of the literature. Appended to the 1996-97 report in inmate suicides.* Ottawa, ON: Correctional Service of Canada.
- Snell, T. L., & Morton, D. C. (1994). *Women in prison*. (Special report). Washington, DC: Bureau of Justice Statistics.
- Wichman, C., Serin, R., & Motiuk, L. L. (2001). Predicting suicide attempts among male offenders in federal penitentiaries. Ottawa, ON: Correctional Service of Canada

# **APPENDIX A**

# **DESCRIPTION OF THE VARIABLES USED IN THE SUICIDE ANALYSES**

# **Initial Variables Created:**

edu_comp	higher values indicate less education variable composed of: (3) empres01 (under grade8) (2) empres02 (under grade 10) (1) empres03 (no high school diploma)
pr_adcon	degree of number of adult convictions (higher is more serious) (0) all are 0 (no previous convictions (1) acrres01 (adult court) (1) acrres06 (one previous convictions) (2) acrres05 (2 to 4) (3) acrres04 (5 to 9) (4) acrres03 (10 to 14) (5) acrres02 (15 or more)
pr_yccon	degree of number of adult convictions (higher is more serious)  (0) all are 0 (no previous convictions  (1) ycrres01 (youth court)  (1) ycrres06 (one previous convictions)  (2) ycrres05 (2 to 4)  (3) ycrres04 (5 to 9)  (4) ycrres03 (10 to 14)  (5) ycrres02 (15 or more)
cogprob	cognitive problems (higher is more serious) proportion of: empres04 (learning difficulties) empres05 (learning disability) empres07 (memory problems) empres08 (concentration problems) empres09 (reading problems) empres10 (writing problem) empres11 (numeracy problem) perres35 (mental deficiencies)

**empprob** employment problems (higher is more serious)

proportion of:

empres13 (no skill area \trade \profession) empres16 (unemployed at arrest at arrest) empres17 (unemployed 90% or more) empres18 (unemployed 50% or more)

empres19 (unstable job history) empres22 (no employment history)

empres27 (fired)

**fam\_ss** poor social support from family (higher is more problems)

proportion of:

famres01 (unattached)

famres02 (absent mother or equivalent) famres04 (absent father or equivalent)

famres08 (sibling poor)

famres09 (other relative poor) famres11 (unmarried currently)

famres12 (married/common law past) perres03 family problems-current)

proportion of:

famres03 (maternal poor) famres05 (paternal poor)

famres06 (dysfunctional parents)

famres07 (parents involved in spousal abuse) famres15 (sexual problems past or present)

famres16 (communication problems) famres17 (victim of spousal abuse) famres26 (family functioning poor)

**intprob** internalizing problems (higher is more serious)

proportion of:

assres01 (socially isolated)

assres10 (easily led)

perres18 (assertion problem)
perres25 (worries unreasonably)

victmzd victimized (higher is more serious)

proportion of:

assres09 (victimized)

famres17 (victim of spousal abuse)

**victmzr** victimizer(higher is more serious)

proportion of:

famres18 (perpetrator of spousal abuse) famres27 (law violation-child abuse) famres28 (law violation-incest)

incest (committed incest)

**comprob** community functioning problems

proportion of:

comres15 (no hobbies)

comres16 (no organized activity) comres17 (unaware of social services)

comres18 (used social assistance) assres07 (on membership in prosocial groups)

**no\_sawr** insight and empathy and self-awareness problems

proportion of:

perres01 (self aggrandizement)
perres12 (poor regard for others)
perres13 (socially unaware)
perres15 (empathy problem)

perres16 (inflexible) perres28 (non-reflective)

perres29 (conscientiousness low)

prob\_sol poor social problem solving;

proportion of:

assres11 (communication problem)
perres11 (unrealistic goal setting)
perres19 (poor stress management)
perres20 (poor conflict resolution)

**impulsv** impulsivity thrill-seeking and risk taking, manipulative

proportion of:

perres14 impulsive)

perres26 (risk taking problematic)

perres27 (thrill seeking) perres30 (manipulative)

**angry** angry hostile and aggressive with low frustration tolerance

proportion of:

perres17 (aggressive)

perres23 (low frustration tolerance)

perres24 (hostility problem)

### **psychia** psychiatric history

proportion of:

perres36 (diagnosed past) perres37 (diagnosed current)

perres39 (prescribed medicine in past) perres40 (prescribed medicine current)

perres41 (hospitalized past)
perres42 (hospitalized current)
perres43 (outpatient past)
perres44 (outpatient current)

perres45 (program participation past) perres46 (program participation current)

### alchi alcohol abuse

proportion of:

subres02 (drink frequent) subres01 (early age drinking) subres03 (drink binges) subres05 (abuses alcohol)

### drug\_ab drug abuse

proportion of:

subres18 (abuses drugs) subres15 (frequent drug use) subres14 (early age drug use)

# **discprb** prison problems

proportion of:

ycrres11 (community based discipline fail) ycrres12 (disciplinary transfer in open security)

ycrres13 (disciplinary reprimand while in secure custody)

ycrres14 (attempted escape from secure custody)

ycrres15 (transferred from secure to adult)
acrres11 (community-based sanctions fail)
acrres12 (seg. for disciplinary infractions)
acrres13 (attempted escape /ual /escapes)

acrres14 (reclassification to higher level of custody)

acrres15 (fail on conditional release)

acrres16 (< 6 mos. since last incarceration)

### suic\_to all suicide indicators

proportion of:

suires01 (inmate may be suicidal)

suires02 (inmate has previous suicide attempt) suires03 (inmate has psychological/psychiatric)

suires04 (loss of relative due to death) suires05 (major problem - i.e., legal sit) suires06 (influence of alcohol or drug)

suires07 (signs of depression) suires08 (expressed suicide intent)

suires09 (has suicide plan)

# Factors created from factor analyses<sup>4</sup>

## **Externalizing and Social Cognitive Problems**

Composed of:

Low self-awareness and empathy problems

Social problem-solving

Impulsivity

Anger

### **Substance Abuse**

Composed of:

Alcohol abuse problems
Drug abuse problems

### Internalizing and Victimized with Psychiatric Problems

Composed of:

Social isolation and internalization

Victimization

Psychiatric problems

## **Dysfunctional Family Relationships**

Composed of:

Victimizer

Poor social support

Dysfunctional family relationships

## **Lack of Education and Cognitive Functioning Problems**

Composed of:

Cognitive problems

Education completed

Note: All factors were divided by the number of variables that made up the factor.

# **High Criminal Risk**

Composed of:

Lack of community functioning
Employment problems
Discipline problems
Previous adult convictions
Previous Youth convictions