



Universiteit Utrecht

# **Adjustment to Life in Custody Among Canadian Serious and Violent Young Offenders: Physical Aggression, Perceived Level of Support From Correctional Staff, and Feelings of Personal Safety**

by

F.W.T. Van der Heul B.A.

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Department of Developmental Psychology, Utrecht University, The Netherlands

and

The School of Criminology, Simon Fraser University, Burnaby BC, Canada

Student number: 0309397

Supervisors:

Dr. Marcel A.G. van Aken, Utrecht University, The Netherlands

Dr. Raymond R. Corrado, Simon Fraser University, Burnaby, BC, Canada

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## Abstract

*Two theoretical explanations – importation and deprivation – are commonly used to explain inmate adjustment to the correctional environment. This study examined the effects of selected importation and deprivation factors on youth’s perceived level of support from correctional staff, their perceived level of personal safety, and whether or not they engage in physical aggressive behaviour, while in custody. It controlled for gender, age, race and prior incarceration time. In addition, the effectiveness of the importation, deprivation, and integrated model individually have been investigated. Self-reported data and information from institutional files, collected from 63 serious and violent young offenders in two of British Columbia’s major custody centres, were used. The results showed no significant effects of the importation and deprivation factors on whether or not youth engage in physical aggressive behaviour in custody. However, results did reveal significant importation and deprivation predictors of perceived level of support from correctional staff and perceived level of personal safety in custody. Youth, who reported higher levels of institutional violence and fewer visits from caregivers, perceived less support from correctional staff. In addition, youth, who were older and reported higher levels of institutional violence, were found to perceive lower levels of personal safety. Finally, victims of physical abuse reported lower levels of personal safety than youth who were not a victim of physical abuse. Findings tended to support the independent effect of the deprivation approach; however, support was also found for the integrated approach, which combines the importation and deprivation factors, in explaining juveniles’ adjustment to imprisonment. Conclusively, the deprivation and integrated model were only able to predict 32% to 36% of the explained variance in perceived level of support and personal safety in custody, which indicates that further research is essential in order to increase the predictive accuracy of adjustment to life in custody among juvenile offenders.*

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**Keywords:** importation model; deprivation model; juvenile adjustment; physical aggressive behaviour; perceived level of support; perceived level of personal safety

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## Table of Contents

<b>Acknowledgment.....</b>	<b>ii</b>
<b>Abstract.....</b>	<b>iii</b>
<b>Introduction.....</b>	<b>1</b>
<b>Deprivation Model .....</b>	<b>7</b>
<b>Importation Model.....</b>	<b>9</b>
<b>Integrated Approach .....</b>	<b>11</b>
<b>Hypotheses.....</b>	<b>12</b>
<b>Method .....</b>	<b>16</b>
<b>Results .....</b>	<b>22</b>
• <b>Predicting Physical Aggressive Behavior of Youth in Custody .....</b>	<b>23</b>
• <b>Predicting Perceived Level of Support From Correctional Staff.....</b>	<b>25</b>
• <b>Predicting Youth’s Feelings of Personal Safety in Custody .....</b>	<b>28</b>
<b>Discussion .....</b>	<b>31</b>
<b>Limitations and Implications for Future Research.....</b>	<b>34</b>
<b>Conclusion .....</b>	<b>36</b>
<b>References.....</b>	<b>38</b>
<b>Appendices.....</b>	<b>41</b>
• <b>Appendix 1: Questionnaire .....</b>	<b>41</b>
• <b>Appendix 2: Descriptives Physical Aggressive Behavior.....</b>	<b>46</b>
• <b>Appendix 3: Descriptives Perceived Level of Support.....</b>	<b>47</b>
• <b>Appendix 4: Descriptives Perceived Level of Personal Safety.....</b>	<b>48</b>

## Tables

<b>Table 1: Logistic Regression Analysis of Engagement in Physical Aggressive Behavior .....</b>	<b>24</b>
<b>Table 2: Multiple Regression Analysis For Perceived Level of Support .....</b>	<b>27</b>
<b>Table 3: Multiple Regression Analysis For Perceived Level of Personal Safety .....</b>	<b>30</b>

## Introduction

After major criticism towards the Young Offenders Act in Canada and widespread discussion between different provinces and interest groups on how to amend the previous act, the Youth Criminal Justice Act (YCJA) was enacted in 2003. The major goal of the YCJA is to decrease the use of court and custody<sup>1</sup> for juvenile offenders convicted of minor offences, for example property crime, but at the same time introducing more crime control elements, by imposing harsher and longer sentences for juvenile offenders convicted of more serious and violent offences. A recent study conducted by Bala, Carrington and Roberts (2008) demonstrates that, since the introduction of the YCJA, a significant decrease occurred in the use of court and custody for young offenders, without an increase of youth crime. However, the Canadian public still believes that juvenile court sentences are too lenient and therefore, in contrast to the above evidence, are perceived as being a contributing factor to youth crime (Corrado & Markwart, 1992; Doob & Cesaroni, 2003). Even more interestingly, the Conservative government has recently proposed new legislation in which deterrence<sup>2</sup>, as a principle of youth sentencing, will be reintroduced. This is in strong contrast with research demonstrating that deterrence as a sentencing principle will most likely not deter serious and violent young offenders (Corrado, Gronsdahl, MacAlister, & Cohen, 2007), and will not reduce levels of

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<sup>1</sup> Under section 39 (1), custodial sentences can only be imposed if one or more of four conditions are met:

- (a) the young person has committed a violent offence; or
- (b) the young person has failed to comply with non-custodial sentences; or
- (c) the young person has committed an offence for which an adult would be liable to imprisonment for a term of more than two years and has a history that indicates a pattern of findings of guilt; or
- (d) in exceptional cases, where the young person has committed an indictable offence and the aggravating circumstances of the offence are such that the imposition of a non-custodial sentence would be inconsistent with the purpose and principles of youth sentencing.

<sup>2</sup> Deterrence, as a principle of sentencing, refers to the imposition of a sanction for the purpose of discouraging the offender and others from engaging in criminal conduct (Cesaroni & Bala, 2008).

youth crime (Bala, Carrington & Roberts, 2008; Cesaroni & Bala, 2008). Instead it will increase the use of custody and impose serious, negative consequences on youth, without making the public more safe. While the political discussion continues on whether or not to ‘get tough on youth crime’, a significant body of research shows the negative effects of imprisonment on young offenders (Connell & Farrington, 1996; Doob & Beaulieu, 1992). More specifically, young offenders are suggested to be more susceptible, than adult offenders, to the deprivations and frustrations of life inside the prison, commonly referred to as the “pains of imprisonment” (Bartollas, 1982; Irwin & Cressey, 1962; Zamble & Porporino, 1988). Therefore, incarceration may have more profound and harmful effects on young offenders, which can result in increased levels of stress, fear, anger, and anti-staff attitudes (Carrington & Roberts, 2008; Gover, MacKenzie & Armstrong, 2000). This in turn, strongly interferes with the rehabilitation process of the youth (Gendreau, Little, & Goggin, 1996). Since rehabilitation is one of the primary goals of sending youth to custody and this is related to the level of adjustment, it is important to understand how youth adjust to an institutional environment, and more importantly what influences youth adjustment. Surprisingly, only few studies examine adjustment to life in custody among youth specifically. Adaptation to imprisonment is commonly explained by two models, the deprivation model, which focuses on the influence of prison-specific variables (Sykes, 1958), and contrastingly, the importation model, which focuses on the unique characteristics, attitudes, and experiences of the inmate, which are manifested prior to incarceration (Irwin & Cressey, 1962). A better understanding of adjustment to imprisonment is particularly important for juvenile offenders as they are still young and rehabilitation efforts can be very successful. More importantly, several studies found that adjustment (e.g. disciplinary infractions, participation in educational programs) can be predictive of recidivism (Gendreau,

Little, & Goggin,1996; Gerber & Fritsch, 1995; Hairston, 1991). Overall, a better understanding of juvenile adjustment can promote policy development within custodies, which aims to improve the conditions of inmates, as well as their rehabilitation process, and may as a consequence reduce recidivism.

It is for the above reasons that this study investigates adjustment to life in custody among serious and violent young offenders, from two of British Columbia's major custody centers. More explicitly, this study attempts to identify predictors of youth's adjustment to imprisonment, which are either specific to the institutional environment itself and therewith the experiences of the youth while incarcerated (deprivation), or to the unique characteristics and experiences of the youth manifested prior to their incarceration (importation). Most research examining adjustment to imprisonment focused on Clemmer's (1940) concept of 'prisonization', which is defined as "taking on, in greater or lesser degree, the folkways, mores, customs, and general culture of the penitentiary" (p.270). In other words, inmates undergo a socialization process in which prior values, beliefs, and attitudes are replaced by the cultural values of the prison, most often characterized by manipulation and deceptions. However, more research has started to examine the specific behavioral, emotional and psychological responses of inmates to imprisonment. Toch (1977) for example developed an ecological model on how to survive in prison, which studied the psychological consequences of interaction between individuals and their environment. According to this model, there should be a match between the individual's needs and the environment, in order for successful adjustment to take place. Toch (1977) argues that the following seven needs are differentially aimed to be accomplished: safety, privacy, structure, emotional feedback, support, activity and freedom. The likelihood that an inmate adjusts successfully to life in

prison is assumed to increase if there is a fit between the individual's needs and the institution's ability to satisfy the needs. This is in line with the special needs model, which argues that youth whose specific emotional and personal needs are not being met by the justice system, are more likely to recidivate (Odgers, Corrado, Cohen, & Glackman, 2003).

Another, more recent theory concerning adjustment to imprisonment, was introduced by Harvey (2007), who states that adjustment is a process whereby individuals aim to reach a cognitive, emotional and behavioral equilibrium. During incarceration, inmates have to deal effectively with potentially stressful situations, but also with different emotions that emerge in those stressful situations. Most youth entering custody experience a preoccupation with safety, uncertainty, deprivation of freedom and control, and feelings of separation and loss. In order to cope with those negative experiences, Harvey (2007) argues that a youth has to adjust in three different ways. First of all, a youth has to adjust *practically* in that they must learn about the prison rules, regulations and regime. Secondly, they will have to adjust *socially*, in terms of being able to communicate and interact with staff and prisoners, in a positive and functional way. Finally, youth have to adapt *psychologically* in order to regulate their cognitions and emotions, and to manage their level of psychological distress. Youth may have more difficulties psychologically adjusting than adults, as they have fewer coping skills to manage stressful situations, such as incarceration. Most youth experience incarceration as highly traumatic, and it is likely to be the longest time they have ever spent away from home (Biggam & Power, 1997). Harvey (2007) further explains that the latter three modes of adjustment interact with each other. Research among youth in custody suggests, for example, that those youth who were not able to regulate their emotions and who had an external locus of control, suffered from more psychological distress, and had more difficulties adjusting in

their first month. In addition, Harvey (2007) describes adaptation to imprisonment as a dynamic process, in which individuals can move back and forward, depending on their experiences in custody. Conclusively, to what extent an individual adapts is highly dependent on the availability of internal and external resources available to each individual. In other words, it depends on the psychological resources and coping mechanisms of the individual, and his or her ability to seek and receive support from within custody that will determine how well a youth adapts to custodial life.

Based on the theories of Toch (1977) and Harvey (2007), and earlier research in relation to adult adjustment to imprisonment, this study will investigate the following three constructs pertinent to a youth's adjustment to life in custody. First of all, whether or not a youth engages in *physical aggressive behavior* while incarcerated. Prison violence has been a major concern for years, and its minimization is a high priority of correctional staff who aim to maintain an orderly and safe institution. Studying predictors of whether or not a youth engages in physically aggressive behavior will help correctional staff to better and sooner identify high risk youth. In response, correctional staff can monitor at-risk youth more intensely, or put these high risk youth into treatment programs for their violent behavior. This is aimed at reducing the risk of harm inflicted on other inmates and staff, and can also improve the rehabilitation process of the youth.

Secondly, this study attempts to find predictors of youth's *perceived level of support* from correctional staff. In a study conducted by Wright (1989), inmates identified support as their highest need or concern, followed by their desire for emotional feedback, activity, structure, and safety. The level of support inmates perceive from correctional officers is suggested to reduce inmate-perceived stresses associated with imprisonment, thereby

enhancing inmates' perception of control, which in turn improves their adjustment to life in custody. Support for this hypothesis is given by studies that found a positive correlation between social support, and an individual's attempt to cope with an often hostile prison environment (Fagan, 1989; Ryan & McCabe, 1994). Further, the study of Biggam and Power (1997) highlighted the importance of staff-inmate relationships, in the sense that the greatest predictor of anxiety, depression, and hopelessness among inmates was an overall discrepancy in emotional support from correctional officers. Higher levels of support was also associated with fewer social rule infractions. In conclusion, support from correctional officers is expected to play a crucial role in youth's adjustment to life in custody.

Thirdly, this study investigates the youth's *perceived level of personal safety* while in custody. Personal safety is highly important in the adjustment of the youth to imprisonment, as it is found to be predictive of the general well-being of prison inmates (McCorkle, 1993). More importantly, Ortman (2000) argues that psychotherapeutic treatment, and therefore rehabilitation, is impossible if there is a general feeling of violence among inmates. He found a relatively strong correlation ( $r = .11$  to  $r = .19$ ) between fear of being assaulted by other inmates and recidivism. Inmates who experienced high levels of fear were more likely to recidivate than inmates who experienced low levels of fear. In addition, low levels of safety can also be associated with more internal problems, and more difficulty in socially interacting with other inmates and staff (Toch, 1977; Wright, 1991).

As mentioned above, the two most common theories for explaining adjustment to imprisonment are the importation and deprivation model. When examining youth's adjustment to life in custody in the present study, these two models will be used. The

theoretical background, as well as the association of the two models with the three constructs of adjustment as described above, will be discussed in more detail below.

### **Deprivation Model**

The deprivation model posits that adjustment of inmates to institutional life is primarily a result of the institutional environment itself, and therewith the experiences of the inmate while incarcerated (Sykes, 1958). Institutional adjustment therefore occurs irrespective of the unique characteristics of an inmate prior to incarceration. Early deprivation theorists argued that institutional deprivations produce ‘pains of imprisonment’, which include the loss of liberty, autonomy, goods and services, heterosexual relationships, security and safety (Sykes, 1958). According to the deprivation model, inmate’s behaviors in prison are manifestations of how they adapt and cope with the negative experiences inflicted by the prison environment.

In order to examine the accuracy of the deprivation model, researchers have studied the relation between variables that are specific to an institutional environment and experiences of the youth while incarcerated, looking at different levels of adjustment. One of the most common deprivation factors examined in predicting institutional adjustment is the type of prison and therewith the level of security (Goodstein & Wright, 1991; MacDonald, 1999). Institutions that focus more on custody than treatment, such as maximum-security prisons, are found to be more stressful for inmates and demonstrate more incidents of institutional misconduct (Feld, 1981). Staff-inmate ratios and the level of physical abuse between inmates, are other deprivation variables found to influence prison misconduct (McCorkle, Miethe & Kriss, 1995; Poole & Regoli, 1983, Feld, 1981). When considering the

length of incarceration, studies suggest that both men and women with longer sentences and incarceration periods are more violent while incarcerated, and engage in significantly more prison misconduct, as opposed to men and women with shorter sentences and incarceration time (MacKenzie, Robinson & Campbell, 1989; Casey-Acevedo & Bakken, 2001). The latter finding supports the concept of ‘prisonization’ in the sense that as inmates become more involved in the prison subculture, they are less likely to adhere to staff norms and values. In contrast, Flanagan (1980) found that over the course of incarceration of an inmate, their ratings of hostility either stay the same or decrease. Results showed that inmates serving short-term sentences committed more infractions in the middle stages (e.g. the second and the third quarter) of their sentence, and committed fewer infractions in the last quarter of their sentence. In relation to perceived level of safety, incarceration time was found to have an inverse correlation (MacKenzie, Robinson & Campbell, 1989; Casey-Acevedo & Bakken, 2001). In other words, women and men, with longer incarceration periods reported fewer safety concerns while being incarcerated, compared to women and men with shorter incarceration periods. Further, a significant body of research shows the high incidence of victimization by other inmates (Connell & Farrington, 1996). In the studies of Adler (1994) and Beck (1995), 20% to 45% of the juveniles reported having been victimized during their current incarceration period. Youth who are victimized in custody, are suggested to perceive greater levels of fear of being victimized, and demonstrate more difficulties adjusting to the deprivations of life in custody, than inmates who were not victimized (Maitland & Sluder, 1998). In addition, youth who were afraid of being victimized tended to have more arguments with other inmates and correctional staff (MacKenzie, 1987). Finally, the deprivation variable visitation, as examined by Ellis, Grasmick, and Gilman (1974), was found to reduce

aggressive behaviour among inmates, which indicates the importance of contact with family and or friends from outside the prison, on inmates' behaviour.

In sum, important factors underlying the deprivation model include length of incarceration, type of prison, perceived level of institutional violence, experienced victimization in custody, and visitation from friends and family. However, despite the large body of research showing the effect of the deprivation factors on adjustment to imprisonment, it can not explain why inmates, who share the same deprivation characteristics, adjust in different ways.

### **Importation Model**

In contrast to the deprivation model, the importation model, which was initially proposed by Irwin and Cressey (1962), argues that adjustment to prison life is primarily a result of the unique characteristics, attitudes, and experiences of the inmate that are manifested prior to incarceration. Norms, values and morals, for example concerning violence, are imported into the institution from sources that are unrelated to life in prison (Jiang & Fisher-Giorlando, 2002; Irwin & Cressey, 1962). The effectiveness of the importation model can therefore be examined through the association of inmates' pre-prison characteristics with different levels of adjustment to imprisonment. Importation factors may especially be important in regards to the adjustment of serious and violent young offenders, as they are often identified by a multi-problem profile. A study, examining 507 serious and violent young offenders, showed that the youth were highly characterized by mental health problems, such as ADHD, conduct disorder, depression, post traumatic stress disorder, and drug and alcohol abuse (Corrado,

Gronsdahl, MacAlister, & Cohen, 2007). In addition, they often come from multi-problem families, have poor academic performance, have been a victim of serious physical abuse, sexual abuse, and are highly influenced by negative peer and street-lifestyles. All of the latter may be associated with poorer adjustment, as the youth who share these characteristics are less likely to have sufficient coping skills to deal with the stress that is associated with imprisonment (Frydenberg, 1997). Support is given by the study of Cesaroni, and Peterson-Badali (2005) who found that youth who already experienced multiple developmental risks (e.g. previous child welfare contact, drug and alcohol use, previous police contact, school failure, low self-esteem, homelessness) were more negatively affected by imprisonment, in terms of psychosocial adjustment, in particular with regard to internalizing behavior (e.g. withdrawn, somatic complaints, anxious/depressed), than those who enter custody with very few or no preexisting risk factors. Furthermore, according to the importation approach, prison misconduct can be predicted through the same factors that predict crime outside the prison. Therefore, inmates with a long history of violent behavior tend to have a higher risk of behaving violently in prison (Flanagan, 1989; Irwin & Cressey, 1962). Violent behavior is also found to be inversely correlated with age. The older the inmate becomes, the less likely he or she is to engage in violent behaviour in prison (MacKenzie, 1987; Zamble & Porporino, 1988). Reasons for this inverse correlation can possibly be that young people are more impulsive, or may fail to recognize the costs of aggressive behaviour in prison. The study of Corrado, Odgers and Cohen (2000) suggested that female young offenders often feel safe in custody, as they perceive their custodial sentence as a means of protecting them from high-risk environments. In addition, female inmates are suggested to be in greater need of social support, than male inmates. The reason for this may be that females are more relationship oriented, and therefore require more social support (Jiang & Winfree, 2006). Race, is another

importation variable found to influence the adjustment process. For example, the study of Macdonald (1997) suggested that aboriginal youth reported more concerns in regards to racism and violence in custody. Finally, sexual abuse victimization, as examined by Islam-Zwart and Vik (2004), is suggested to influence external adjustment problems (e.g. arguments, fights, etc.) in prison.

In sum, important factors underlying the importation model include gender, age, race, current offence, prior incarceration history, and history of physical and sexual abuse.

### **Integrated Approach**

When considering the above studies, it can be concluded that empirical support is found for the importation, as well as the deprivation model. This led researchers to investigate the interactive effects of the importation and deprivation model, instead of examining the two models individually (Gendreau, Goggin and Law, 1997; Toch, 1977). For instance, Gendreau, Goggin and Law (1997), conducted a meta-analysis on 39 studies which examined both the deprivation and importation model. This meta-analysis supports the integrated approach in which adjustment to prison life can be affected by both deprivation (e.g. institutional) and importation (e.g. individual) variables. Other support for an integrated approach comes from studies in which a majority of the variables of one model explains adjustment, but not all variables (Cao, Zhao, & van Dine, (1997). In conclusion, neither of the models individually have been able to fully predict adjustment to life in prison. Therefore, the most efficient models are considered to be those that integrate factors from both importation, as well as the deprivation model, which is examined in the following.

## **Hypotheses**

The major goal of this study is to gain a better understanding of adjustment to imprisonment among serious and violent young offenders. More specifically, it attempts to find predictors that either positively or negatively affect: 1) whether or not youth engage in physical aggressive behavior in custody; 2) the perceived level of support from correctional staff; and 3) the perceived level of personal safety. The predictors used in this study are, based on the two models, divided into deprivation and importation variables. The deprivation variables, which are specific to the institutional environment and to the experiences of the youth in custody, include: 1) type of sentence (open/closed); 2) perceived level of violence; 3) victimized in custody; and 4) number of times caregivers visit the youth. The importation variables, which are specific to the youth characteristics prior to incarceration, include: 1) current offence (violent/non-violent); 2) history of sexual abuse; and 3) history of physical abuse. Gender, age, race (e.g. Caucasian/Aboriginal) and prior incarceration time serve as control variables.

This study first investigates the effectiveness of the individual predictors on the three constructs of adjustment. Which individual predictor is the most powerful in explaining youth's adjustment to life in custody? Subsequently, the effectiveness of both models will be compared. The importation model will therefore be represented by the importation variables together, and the deprivation model by the deprivation variables together. The latter will explain if the importation, as well as the deprivation model individually, are significantly able to explain adjustment of youth to life in custody, and, if so, which one is suggested to be the most powerful? Finally, the effectiveness of both models combined, the integrated approach, will be examined to test whether or not an integrated approach is significantly more

predictive than the two models individually. Based on trends in the adult literature, as discussed earlier, the following hypotheses will be tested in relation to:

*Physical aggressive behavior in custody:*

**Hypothesis 1:**

The importation variables age and prior incarceration time, and the deprivation variable visitation from caregivers are significant and inversely predictive of engagement in physical aggression in custody.

**Hypothesis 2:**

A youth who shares the importation characteristics of being male, Aboriginal, convicted of a violent offence, victim of physical and sexual abuse, and the deprivation characteristics of being sentenced to closed custody and victimized in custody significantly predict a higher likelihood of engaging in physical aggressive behavior in custody, as opposed to female, Caucasian youth, convicted of a non-violent offence, who have not been a victim of physical and sexual abuse, sentenced to open custody, and not victimized in custody.

**Hypothesis 3:**

The deprivation model is significantly more effective than the importation model in predicting whether or not a youth engages in physical aggressive behavior in custody, while controlling for confounding variables.

**Hypothesis 4:**

The importation and the deprivation model together (integrated approach) are significantly more effective than the importation or the deprivation model individually, in predicting whether or not a youth engages in physical aggressive behavior in custody, while controlling for confounding variables.

Perceived level of support from correctional staff:

**Hypothesis 5:**

The importation variable age and deprivation variable perceived level of violence in custody are significant and inversely predictive of perceived level of support from staff.

**Hypothesis 6:**

The importation variable prior incarceration time and deprivation variable visitation from caregivers are significant and positively predictive of perceived level of support from staff.

**Hypothesis 7:**

A youth who shares the importation characteristics of being female, Caucasian, convicted of a non-violent offence, no history of physical and sexual abuse, and the deprivation characteristics of being sentenced to open custody and not victimized in custody significantly predict higher levels of perceived support from staff, as opposed to male, aboriginal youth, convicted of a violent offence, who have been a victim of physical and sexual abuse, are sentenced to closed custody and who have been victimized in custody.

**Hypothesis 8:**

The deprivation model is significantly more effective than the importation model in predicting perceived level of support from correctional staff, while controlling for confounding variables.

**Hypothesis 9:**

The importation and the deprivation model together (integrated approach) are significantly more effective than the importation or the deprivation model individually, in predicting perceived level of support from correctional staff, while controlling for confounding variables.

Perceived level of personal safety in custody:

**Hypothesis 10:**

The importation variables age and prior incarceration time, and the deprivation variable visitation from caregivers are significant positively predictive of perceived level of personal safety in custody.

**Hypothesis 11:**

The deprivation variable perceived level of violence is significant inversely predictive of perceived level of personal safety.

**Hypothesis 12:**

A youth who shares the importation characteristics of being female, Caucasian, convicted of a non-violent offence, no history of physical and sexual abuse, and the deprivation characteristics of being sentenced to open custody and not victimized in custody significantly predict higher levels of personal safety in custody, as opposed to male, aboriginal youth, convicted of a violent offence, who have been a victim of physical and sexual abuse, who are sentenced to closed custody and who have been victimized in custody.

**Hypothesis 13:**

The deprivation model is significantly more effective than the importation model in predicting perceived level of personal safety, while controlling for extraneous variables.

**Hypothesis 14:**

The importation and the deprivation model together (integrated approach) are significantly more effective than the importation or the deprivation model individually, in predicting perceived level of personal safety, while controlling for extraneous variables.

## **Method**

### *Procedure*

The data used for this study was collected as part of a larger longitudinal study, the Vancouver Serious and Violent Incarcerated Young Offenders Study (VYOS). This study was conducted to investigate the impact of incarceration on juvenile offenders, including their sense of safety; their ability to adjust to institutional life; their utilization of school and other programs; their perceptions of the criminal justice system; their self-perceptions; and their views about deterrence in light of the custodial experiences on a young offender's intentions and decisions to recidivate. The participants were derived from two open and closed custody centers in the Greater Vancouver Region, British Columbia, Canada. In total, 572 participants have been interviewed in a one-on-one semi structured interview that discussed a wide range of issues, such as offending history, experiences with the youth criminal justice system, education and employment, family life and living situation, drug and/or alcohol use/abuse, physical and mental health, sexual and physical victimization, peers, and self-identity. Besides the actual interview with the youth, data was also gathered by the researchers from the youths' institutional files, which include psychological reports, institutional reports examining the behavior of the youth while in custody, and provincial case files that listed the youth's offending and disposition data. The specific questions from the interview used in this study are shown in appendix 1.

### *Participants*

In total, 75% of the interviewed youth were male and 25% female. The average age of the youth was 16 years (SD= 1,3) with the youngest being 12 and the oldest 19 years of age, although 90% of the youth was older than fourteen. Considering the ethnicity of the youth, a majority of 79% identified themselves as Caucasian and 21% Aboriginal. Most of the youth were convicted of property offences (32%), followed by assault (22%), breach and escape (19%), robbery (16%), drug offence (3%) and sex offence (2%). Thirteen youth (3%) were convicted of murder. In sum, 47% of the youth have been convicted of a violent offence (i.e. murder, sex offence, assault or robbery) and 53% of a non-violent offence (i.e. property offence, drug offence, breach and escape). Considering the prior incarceration time of the youth (M=116 days; SD=145), 11% were incarcerated for the first time, 29% had a prior incarceration time between 1 and 30 days, 7% between 31-50 days, 18% between 51-90 days, and 36% more than 91 days.

### *Dependent Variables*

The first dependent variable investigated in the present study is, whether or not a youth engages in physical aggressive behavior while in custody. If a youth shows any kind of misconduct, including physical aggressive behavior, it will be reported in an 'incident report' which can be found in the youth's institutional file. The researchers conducting this study examined all the incident reports of the youth who participated, and gave the youth a score of (1) if their incident report(s) reported physical aggressive behavior and (0) if no physical aggressive behavior was found. In total, 53% of the youth being interviewed engaged in

physical aggressive behavior. The dataset used for this study unfortunately provided no information in relation to the amount and seriousness of the physical aggressive behavior in which the youth engaged while in custody. Appendix 2 describes in more detail the relationship of the independent variables, with whether or not a youth engaged in physical aggressive behavior.

The second dependent variable examined in this study is the youth's perceived level of support from correctional staff. In order to measure the perceived level of support from staff, answers to 8 questions, measured on a 5-point Likert scale (i.e. 1) Strongly disagree; 2) Disagree; 3) Neutral; 4) Agree; or 5) Strongly agree) were used. A reliability analysis is conducted to determine the extent to which the 8 questions relate to each other and which questions could be identified as problem items and should therefore be excluded from the scale. The Cronbach's alpha increased from .483 (N=9) to .675 (N=8) after deleting one question ("I think staff members have had enough training to do their jobs well"). The Cronbach's alpha did not increase by deleting any more items. The following questions were finally used: 1) Staff are too quick to use physical force on residents in this institution; 2) I go to staff members to talk about my problems; 3) Correctional Officers are able to talk with me when I need them; 4) Staff usually tell residents what is going on; 5) Staff members are not interested or concerned about the needs of residents; 6) Staff members catch and punish the real "trouble makers"; 7) Staff members do their best to ensure that residents are protected from harm by other residents; and 8) I get along well with the staff at this institution. To derive a score for the perceived level of support from correctional staff, the mean was taken from the 8 answers. This ranged from 1) no perceived level of support, to 5) high perceived level of support from correctional staff. The overall mean level of support was 3.0 (SD=0.6).

More specifically, 24% of the youth being interviewed perceived low levels of support, 58% took a neutral stand in regards to their perceived levels of support, and only 18% perceived high levels of support from correctional staff. Note that in the further analysis, perceived level of support from correctional staff will be examined as a continuous variable. Appendix 3 describes the means and standard deviations of perceived level of support by the independent variables.

The third and final dependent variable investigated in this study is the youth's perceived level of personal safety in custody. This variable is measured through one question: "I feel safe from being physically assaulted by other residents", which is also measured on a 5-point Likert Scale. Scores ranged from (1) "I do not feel safe from being physically assaulted by other residents" to (5) "I feel safe from being physically assaulted by other residents". The overall mean is 2.2 (SD=1.3), which means that the youth on average felt safe in custody. However, results also show that 1 out of 5 did not feel safe in custody. The perceived level of personal safety will also be examined in further analysis as a continuous variable. Appendix 4, describes the means and standard deviations of perceived level of safety by the independent variables.

### *Independent Variables*

In order to investigate the above three constructs of adjustment to imprisonment eleven independent variables are used, which can be divided into three groups. The first group is the control variables. The most common demographic and background variables examined in the past, in relation to inmate adjustment to imprisonment include gender, age, race and prior

incarceration time. Inmates who are female, young of age, aboriginal and incarcerated for the first time may experience a more difficult time adjusting psychologically to life in prison. They are more likely to be from a minority ethnic group compared to the other inmates, and therefore are more likely to hold a greater social distance between themselves and other inmates, which in turn increases the risk of internal problems (depression, anger, stress, anxiety), as well as external problems (difficulty relating to others). In addition, prior incarceration history may be associated with factors such as sentence length and prison security levels, which have been shown to influence adjustment (McCorkle, Miethe, & Kriss, 1995). To help adjust for these variables, the measurements gender, age (M=16,1; SD=1,3), race, and prior incarceration time (M=116; SD=145) will be included as control variables.

The second group, consisting of three independent variables, belongs to the importation model. These variables are specific to the youth characteristics prior to incarceration, and include: 1) the most serious offence for which the youth is currently convicted, which is either violent (e.g. murder, sex offence, assault or robbery) or non-violent (e.g. property offence, drug offence, breach and escape); 2) whether or not the youth has been a victim of physical abuse (No=0, Yes=1); and 3) whether or not the youth has been a victim of sexual abuse (No=0, Yes=1). In sum, 47% of the interviewed youth were convicted of a violent offence, 44% were a physical abuse victim, and 21% of the interviewed youth reported being a victim of sexual abuse.

The third and last group consists of four independent variables belonging to the deprivation model. These variables are all specific to the experience of the youth while in custody and to the characteristics of the custody center itself. The first variable, type of sentence (Closed custody=0/Open custody =1), relates to the level of security, which is

reflected by a number of characteristics. The staff-inmate ratio within a closed custody is for instance higher than in an open custody. Closed custody is also more controlled with respect to inmate movement within custody, free time, and other privileges. A small majority (56%) of the interviewed youth were sent to closed custody and 44% to open custody. The second deprivation variable is whether or not the youth has been victimized in custody (No=0/Yes=1). Ten percent of the youth responded that they had been victimized in custody. Perceived level of violence is the third deprivation variable, and is derived from the mean score of the following four questions (measured on a 5-point Likert Scale): 1)The number of heated arguments is a problem in this institution; 2)Too many residents have objects that they intend to use as weapons; 3)The number of assaults among residents are a problem in this institution; 4)The number of sexual assaults are a problem in this institution. The Cronbach's Alpha of the four questions together is .695 (N=4) and did not increase when other items were deleted. The overall model had a mean of 3.09 (SD=.85). A majority of 52% of the youth perceived high to extreme high levels of institutional violence, compared to 13% perceiving low levels of institutional violence. The remaining 35% of the youth had a neutral response in relation to the perceived level of institutional violence. Note also that the perceived level of violence will be examined as a continuous variable in further analysis. The fourth and last deprivation variable used in the current study is the number of times caregivers visit the youth in custody. This ranges from 1) Daily; 2) Few times a week; 3) Once a week; 4) Few times a month; 5) Once a month to 6) Rarely. In sum 30% of the youth were visited by their caregivers between daily and a few times a week, 49% between once a week and few times a month, and 17% once a month to rarely. On average the youth were visited once a week.

## Results

Before the results are discussed, it is important to note that, for the analyses of the three constructs of adjustment as measured in the current study, a reduction in sample size occurred. This is due to the fact that over the course of the research project more questions were added, some of which are used in the present study. As a consequence, not every youth has been asked the additional questions, as some of them were interviewed before these questions were added, which resulted in excluding them from the analyses. However, it is assumed that this does not bias the characteristics of the participant group, and therefore does not bias the outcome data, as the youth were still randomly chosen to be interviewed and the kind of youth sent to custody under the Young Offenders Act did not change over the period of time the data was gathered. Finally, a total of 63 youth were included into the analyses.

Before conducting the analysis, the dataset has been examined for outliers, and the distributions of continuous variables examined for normality. The independent variables have also been tested for multicollinearity which exists when 'Tolerance' is below .1; and 'VIF' is greater than 10 or an average much greater than 1. No multicollinearity is found, and therefore all independent variables will be included in the study.

In order to examine the importance of each unique importation and deprivation variable, and to be able to compare the three models (importation, deprivation, integrated) in predicting youth's adjustment, extensive analysis is required. This should include controlling for other variables. Therefore, the next analyses will first examine both importation, as well as deprivation variables individually, while controlling for the four possible confounding variables (gender, age, race, and prior incarceration history). Subsequently, the effectiveness of both importation and deprivation models will be compared. The importation model will,

therefore, be represented by the importation variables together, and the deprivation model by the deprivation variables together. This will demonstrate whether the importation as well as the deprivation model are able to significantly explain adjustment of youth to life in custody, and if yes, which of the two models is the most powerful. Finally, the effectiveness of both models together, the so called integrated model, will be examined in order to find out if the two models are additive in explaining adjustment, and more importantly if they are significantly more predictive than the two models individually. A significance level of .05 is used in order to determine whether or not a relation is significant. The results, per construct of adjustment, will be described below.

### **Predicting Physical Aggressive Behavior of a Youth in Custody**

A multiple logistic regression analysis has been conducted in order to examine the effectiveness of the individual variables, as well as the three different models, in predicting physical aggressive behavior of a youth in custody. In total, four logistic-regression models are calculated, (see table 1 below), which respectively represent the control variables, the importation model, the deprivation model, and the integrated model. As can be seen in table 1, none of the overall models reached significance ( $p < .05$ ), and therefore none of the variables within the models were found to be significant in predicting whether or not a youth engages in physical aggressive behavior. In conclusion, none of the hypotheses 1 to 4 in relation to physical aggressive behavior in custody (see page 13) can therefore be confirmed. Possible reasons for these unexpected insignificant outcomes will be discussed later on.

**Table 1: Logistic Regression Analysis of Engagement in Physical Aggressive Behavior in Custody**

	<i>Stage 1</i>		<i>Stage 2</i>		<i>Stage 3</i>		<i>Stage 4</i>	
	B(SeB)	Beta	B(SeB)	Beta	B(SeB)	Beta	B(SeB)	Beta
<b>Control variables</b>								
Gender (female=1)	-.118(.285)	.889	-.146(.312)	.864	-.071(.702)	.932	-.161(.824)	.852
Age	.172 (.098)	.842	-.182(.099)	.834	.044(.217)	1.045	.106(.255)	1.112
Race (aboriginal=1)	.033 (.320)	1.033	.003(.321)	1.003	-.158(.839)	.854	-.238(.861)	.788
Number of days in custody	.001 (.001)	1.001	.001(.001)	1.001	-.002(.002)	.998	-.003(.003)	.997
<b>Importation model</b>								
Offence (violent=1)			-.225(.249)	.798			-.428(.608)	.652
History of physical abuse (yes=1)			.177(.261)	1.194			.110(.613)	1.116
History of sexual abuse (yes=1)			.018(.339)	1.019			.187(.958)	1.205
<b>Deprivation model</b>								
Sentence ( open =1)					-.774(.570)	.461	-.848(.641)	.428
Victimized in custody (yes=1)					.118(.877)	1.125	.152(.939)	.164
Perception of institutional violence					-.009(.357)	.991	.105(.392)	.111
Number of times parents visited					.165(.224)	1.179	.283(.256)	.328
Model X <sup>2</sup>	5.454		6.852		1.279		4.739	
df	4		7		8		11	
-2 log likelihood	394.237		392.839		90.390		77.831	
Cox and Snell R <sup>2</sup>	.019		.023		.019		.075	
Nagelkerke R <sup>2</sup>	.025		.031		.044		.101	

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## **Predicting Perceived Level of Support From Correctional Staff**

A hierarchical multiple regression analysis is conducted in order to examine the significance of the individual independent variables, as well as the three different models, in predicting perceived level of support from correctional staff, while controlling for all other variables measured (see table 2). In total, four regression models have been employed, which respectively represent the control variables (stage 1), importation model (stage 2), deprivation model (stage 3) and integrated model (stage 4).

Hypotheses 5,6 and 7 (see page 14) are related to the individual predictive power of the independent variables on perceived level of support from correctional staff. In order to accept or reject the latter hypotheses, the integrated model (stage 4) will be used, since this model controls for all other variables included in the analysis. As the results in table 2 show, only two deprivation variables are found to be significant in predicting the perceived level of support from correctional staff. These include perception of violence ( $\beta = -.361$ ;  $p < .01$ ) and number of times caregivers visit the youth ( $\beta = .278$ ;  $p < .05$ ). The results suggest that youth who perceive higher levels of violence and experience fewer visits from caregivers, report less support from correctional staff. Interesting to note is that prior incarceration time was found significant in the control ( $\beta = -.313$ ;  $p < .05$ ), and importation model ( $\beta = -.290$ ;  $p < .05$ ); however, this significance disappeared ( $\beta = -.209$ ;  $p > .05$ ) when the deprivation variables were included into the model. The remaining variables, including gender, age, race, prior incarceration history, type of offence, history of physical abuse and sexual abuse, type of sentence and victimization in custody were also not found to be significantly predictive of perceived level of support from correctional staff, which results in rejecting the related hypotheses.

Hypothesis 8 proposes that the deprivation model is significantly more effective than the importation model, in predicting perceived level of support from correctional staff, while controlling for control variables. As shown in table 2, the importation model accounts, although not significantly, for 13% ( $R^2=.132$ ;  $p> .05$ ) of the variance, while the deprivation model accounts significantly for 30% ( $R^2=.304$ ;  $p< .05$ ) of the variance in predicting perceived level of support. This means that the deprivation model is more powerful in predicting perceived level of support from correctional staff than the importation model. Therefore hypothesis 8 is accepted.

Hypothesis 9 proposes that the integrated model is significantly more effective than the importation or deprivation model individually, in predicting perceived level of support from correctional staff. As can be seen in table 2, the integrated model accounts significantly for 32% ( $R^2=.316$ ;  $p< .05$ ) of the variance, which is a significant 18% ( $R^2= .184$ ;  $p< .05$ ) increase compared to the importation model, and an insignificant 1.2% increase compared to the deprivation model ( $R^2=.012$ ;  $p>.05$ ). Therefore, hypothesis 9 can only be partially accepted. In other words, the integrated model is significantly more effective than the importation model in predicting perceived level of support from correctional staff, but not significantly more effective than the deprivation model.

In sum, this study suggests that perceived level of violence in custody and visitation from caregivers are significant predictors of perceived level of support from correctional staff, while controlling for gender, age, race and prior incarceration history. In regards to the models, the deprivation model is suggested to be the most effective in predicting perceived level of support from correctional staff.

**Table 2: Multiple Regression Analysis For Perceived Level of Support From Correctional Staff**

	<i>Stage 1</i>		<i>Stage 2</i>		<i>Stage 3</i>		<i>Stage 4</i>	
	B(SeB)	Beta	B(SeB)	Beta	B(SeB)	Beta	B(SeB)	Beta
<b>Control variables</b>								
Gender (female=1)	-.128 (.201)	-.081	-.166 (.226 )	-.105	-.153 (.189)	-.097	-.140 (.213)	-.089
Age	.057 (.120)	.060	.066 (.127)	.069	.015 (.117)	.016	.034 (.125)	.035
Race (aboriginal=1)	.341 (.233)	.183	.303 (.241)	.163	.311 (.216)	.167	.276 (.224)	.148
Prior incarceration time*	<b>-.059 (.024)</b>	<b>-.313*</b>	<b>-.055 (.025)</b>	<b>-.290*</b>	-.039 (.023)	-.209	-.037 (.024)	-.198
<b>Importation model</b>								
Offence (violent=1)			-.105 (.168)	-.084			-.149 (.158)	-.120
History of physical abuse (yes=1)			.113 (.171)	.088			.036 (.161)	.028
History of sexual abuse (yes=1)			.036 (.253)	.022			-.083 (.239)	-.051
<b>Deprivation model</b>								
Sentence ( open =1)					.052 (.155)	.042	.070 (.159)	.056
Victimized in custody (yes=1)					-7.1E-6 (.254)	.000	-.039 (.268)	-.019
Perception of institutional violence *					<b>-.279 (.094)</b>	<b>-.351**</b>	<b>-.287 (.097)</b>	<b>-.361**</b>
Number of times caregivers visited*					<b>.119 (.050)</b>	<b>.284*</b>	<b>.117 (.052)</b>	<b>.278*</b>
Constant	1.822(.515)		1.871(.553)		3.813(-2.468)		2.369 (.638)	
R <sup>2</sup>	.116		.132		<b>.304*</b>		<b>.316*</b>	
R <sup>2</sup> change			.016		<b>.188*</b>		<b>.184*/.012</b>	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

## **Predicting Youth's Feelings of Personal Safety in Custody**

A hierarchical multiple regression analysis is also conducted in order to determine which of the individual independent variables, and which of the three individual models, are able to significantly predict youth's perceived level of personal safety in custody, while controlling for other variables (see table 3). In total, four regression models have been employed, which respectively represent the control variables (stage 1), importation model (stage 2), deprivation model (stage3) and integrated model (stage 4).

Hypotheses 10, 11 and 12 (see page 15) are related to the individual predictive power of the independent variables on perceived level of personal safety in custody. In order to accept or reject the latter hypotheses the integrated model (stage 4) will be used, since this model controls for all other variables included in the analysis. As the results in table 3 show, the control variable age ( $\beta = -.261$ ;  $p < .05$ ), as well as the importation variable victim of physical abuse ( $\beta = -.254$ ;  $p < .05$ ) and the deprivation variable perceived level of institutional violence ( $\beta = -.300$ ;  $p < .05$ ) are individually significant predictors of perceived level of personal safety. The results suggest that the older the youth and the higher the perceived level of institutional violence, the lower the reported level of personal safety. In addition, victims of physical abuse perceived lower levels of personal safety compared to youth who have not been a victim of physical abuse. Therefore, the hypotheses relating to the perceived level of institutional violence and history of physical abuse can be accepted. However, the hypotheses relating age and perceived level of safety can not be accepted, as the results indicate a negative correlation instead of the hypothesized positive correlation. Finally, the remaining variables, including gender, race, prior incarceration history, type of offence, history of sexual abuse, type of sentence, victimization in custody, and visitation from caregivers are, in the present study, not found to be significantly predictive of perceived level of personal

safety in custody. Therefore the hypotheses relating to the latter variables can not be accepted.

Hypothesis 13 proposes that the deprivation model is significantly more effective than the importation model in predicting perceived level of personal safety in custody, while controlling for confounding variables. As shown in table 3, the importation model accounts, although not significantly, for 21% ( $R^2=.205$ ;  $p>.05$ ) of the variance, while the deprivation model accounts significantly for 27% ( $R^2=.272$ ;  $p<.05$ ) of the variance. This means that the deprivation model is significantly more powerful in predicting perceived level of personal safety in custody than the importation model, and therefore hypothesis 13 is accepted.

Hypothesis 14 proposes that the integrated model is significantly more effective than the importation or the deprivation model individually, in predicting perceived level of personal safety. The results in table 3 show that the integrated model accounts for 36% ( $R^2=.359$ ;  $p>.05$ ) of the variance, which is a significant 15% increase ( $R^2=.154$ ;  $p<.05$ ) compared to the importation model and an insignificant 8.7% increase ( $R^2=.087$ ;  $p>.05$ ) compared to the deprivation model. Therefore, hypothesis 14 can only be partially accepted. In other words, the integrated model is significantly more effective than the importation model in predicting perceived level of personal safety in custody. However, the integrated model is not significantly more effective than the deprivation model.

In conclusion, this study suggests that age, history of physical abuse, and perceived level of institutional violence, are significant predictors of youths' perceived level of personal safety in custody, while controlling for gender, age, race and prior incarceration history. In regards to the models, the deprivation model is suggested to be the most effective in predicting youths' perceived level of personal safety while in custody.

**Table 3: Multiple Regression Analysis For Perceived Level of Personal Safety in Custody**

	<i>Stage 1</i>		<i>Stage 2</i>		<i>Stage 3</i>		<i>Stage 4</i>	
	<i>B (SeB)</i>	<i>Beta</i>	<i>B(SeB)</i>	<i>Beta</i>	<i>B(SeB)</i>	<i>Beta</i>	<i>B(SeB)</i>	<i>Beta</i>
<b>Control variables</b>								
Gender (female=1)	-.398 (.376)	-.138	-.679 (.398)	-.235	-.312 (.357)	-.108	-.599 (.380)	-.208
Age	-.492 (.224)	-.282	<b>-.645 (.227)</b>	<b>-.371**</b>	-.293 (.223)	-.168	<b>-.453 (.226)</b>	<b>-.261*</b>
Race (aboriginal=1)	.242 (.444)	.069	.348 (.435)	.099	.195 (.415)	.056	.280 (.408)	.080
Number of days in custody	.017 (.046)	.048	.013 (.045)	.036	.052 (.045)	.147	.048 (.044)	.138
<b>Importation model</b>								
Offence (violent=1)			-.011 (-.305)	-.005			-.030(.289)	-.013
History of physical abuse (yes=1)*			<b>-.729 (.306)</b>	<b>-.303*</b>			<b>-.609(.293)</b>	<b>-.254 *</b>
History of sexual abuse (yes=1)			.831 (.458)	.270			.795(.437)	.259
<b>Deprivation model</b>								
Sentence (open =1)					.252 (.299)	.108	.232 (.290)	.099
Victimized in custody (yes=1)					.814 (.465)	.219	.769 (.467)	.207
Perception of institutional violence*					<b>-.463 (.180)</b>	<b>-.312*</b>	<b>-.445 (.177)</b>	<b>-.300*</b>
Number of times parents visited					-.081 (.097)	-.102	-.062 (.094)	-.078
Constant	3.342 (.978)		4.081(.994)		3.962 (1.164)		4.623 (1.162)	
R <sup>2</sup>	.094		.205		<b>.272*</b>		.359	
R <sup>2</sup> change			.111		<b>.178*</b>		<b>.154*/.087</b>	

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

## **Discussion**

The purpose of the present study is to gain a better understanding into the adjustment of life in custody among serious and violent young offenders. More specifically, this study explored possible predictors of youth's adjustment to imprisonment that were either specific to the unique characteristics of the youth themselves (importation) or to the institutional environment (deprivation). It is critical to predict youth's level of adjustment to life in custody, as a poorer adjustment interferes with the rehabilitation process of the youth, and as a consequence may increase the risk of recidivism (Gendreau, Little & Goggin, 1996). Identifying vulnerabilities of youth in custody allows correctional staff to provide resources to those youth who are in greatest need. Adjustment was, in the current study, measured in the following three constructs: 1) engagement in physical aggressive behaviour; 2) perceived level of support from correctional staff; and 3) perceived level of personal safety, while in custody. Only a few studies examine the relationship between multiple constructs of adjustment and possible predictors in one single study, which makes this study useful. Further, only a few studies control for the possible significant effects of gender, age, race and prior incarceration history.

Surprisingly, the present study did not find any significant predictors of whether or not a youth engages in physical aggressive behaviour while in custody, and thus none of the three models were helpful in explaining this phenomenon. The latter results are inconsistent with other studies, showing that type of custody (open or closed), length of incarceration, and number of visits from friends and family outside the prison, can predict physical aggressive behavior in custody (Feld, 1981; MacKenzie, Robinson & Campbell, 1989; Casey-Acevedo & Bakken, 2001). However, most of these studies were conducted among adult inmates; therefore, the different results here may arise only in relation to adolescent inmates. Another, more plausible, reason for the insignificant findings may be the operationalization of physical

aggressive behavior, as there was no distinction made in regards to the amount and seriousness of the youth's physical aggressive behavior in custody. Consequently, the youth varied dramatically with respect to their physical aggressive behavior. This could range from one single incident to serious physical aggressive behavior, every single day. In other words, the operationalization of physical aggressive behavior was not specific enough, and therefore it may be more difficult to find significant predictors. With regard to future research, it is recommended to take both the extent of physical aggressive behavior into account, as well as its level of seriousness.

In contrast to the first construct, the present study did reveal significant predictors in relation to perceived level of support from correctional officers. Supporting the hypothesis, youth who perceive higher levels of violence in custody perceive lower levels of support from correctional staff. This finding was, to some extent, expected as some of the questions accounting for the perceived level of support are indirectly related to the level of protection from violence by correctional staff. In other words, if the youth perceived high levels of violence he or she would have been less likely to have perceived support from staff, thus the related protection from violence. The second significant predictor from the deprivation model, visitation from caregivers, was also consistent with the proposed hypothesis, and therefore with other studies (Ellis, Grasmick & Gilman, 1974). The results suggest that youth who received more visits, perceived higher levels of support from staff. Surprisingly, and in contrast to the hypotheses and several other studies (Jiang & Winfree, 2006; Islam-Zwart & Vik, 2004) victimization, type of sentence, current offence, and history of sexual and physical abuse, were in the present study not found to be significant predictors of perceived level of support from correctional staff. In relation to the models, the deprivation model is suggested to be the most predictive. However, the total variance of 30% from the deprivation model still

does not account for the total prediction of perceived level of support, and therefore more research is needed in order to enhance predictive accuracy. Further, the overall perceived level of support from correctional staff, as calculated in this study, does to some extent support the findings of Hobbs and Dear (2000), in which youth wished that staff were more supportive. More specifically, the present study found that 20% of the youth perceived low levels of support. However, it is important to note that youth are often cautious about opening up to correctional staff in fear of victimization by other inmates (Zamble & Porporino, 1988). As a result, they may not be able to perceive the level of support they need and desire. Besides, young offenders require a higher level of support than adults because of their lower maturity levels. In addition, incarceration is most likely to be the longest time spent away from home (Biggam & Power, 1997). Nevertheless, one should be careful in blaming correctional officers for not being supportive enough to inmates (Smith, 1984). This matter is more complex than can be explained by the current study. Smith (1984) discussed the ambiguity of the purpose of the prison system, and therewith the role of correctional officers, as to whether it is to provide custody or treatment. This can result in a conflict in the role of correctional officers in relation to inmates, and directly relates to the level of support the youth perceives from them.

In regards to the perceived level of personal safety of the youth in custody, the deprivation model was again found to be the most powerful in its prediction. As hypothesized, youth who perceive higher levels of violence in custody and who have been a victim of physical abuse, perceive lower levels of personal safety while in custody. However, the negative correlation with age, which suggests that the older the youth the lower the perceived level of personal safety, does not support the hypothesis. A possible reason for this may be that older inmates are more likely to engage in more serious violent behavior than

younger inmates, which can result in lower levels of perceived personal safety. However, the present study did not find a significant positive correlation between perceived level of institutional violence and age.

### **Limitations and Implications for Future Research**

As with any study, a number of limitations should be noted from the present study. First of all the sample of juvenile offenders was nonrandom, as they were obtained from only two youth custody centers located in British Columbia. Therefore, the results found in this study have limitations in regards to the ability to generalize to other populations of juveniles across Canada and across other countries. It is thus important to replicate these findings with juvenile offenders from custody centers outside British Columbia and Canada.

Second of all, as mentioned before, this study does not make implications about causality, as this study was a cross sectional study and correlational in nature. As a result, it is uncertain whether the three constructs of adjustment, as measured in this study, were a consequence of the examined importation and deprivation variables, or if they were a cause for the latter variables. For example, perceived level of violence may lead to lower levels of perceived support. However, it is also possible that lower levels of support from correctional staff increase the perceived level of violence. A youth who does not perceive support from correctional staff might feel helpless, and as a consequence perceive higher levels of institutional violence. It will, therefore, be interesting to conduct a longitudinal study in which youth are interviewed multiple times. This will demonstrate how adjustment develops in relation to the experiences of the youth while in custody, and will give more insight into

the causes and consequences of youth's adjustment to life in custody, which is necessary to come up with realistic policies aimed to facilitate inmate adjustment to life in custody.

Another limitation to this study is the way the data has been gathered, namely through self-report measures. For that reason, the data may be subject to possible biases of memory, impression management, and social-desirability of the youth. This may especially be at risk among questions that touch an emotional topic or might affect the youth's self-esteem. For example, history of physical and sexual abuse, and whether or not the youth has been victimized in custody, are items that may not have been disclosed accurately. Most youth will 'act tough' while in custody and will therefore be less likely to confess victimization in custody, which in their view is most likely a sign of weakness. It is, therefore, important for future studies to employ a multi-measure approach (i.e. correctional officers, family, institutional files) in gathering data to increase the validity of the results. However, institutional files and correctional officers may not always have all the information of the youth either. Nevertheless, it would be interesting to devote a study to the latter matter. To what extent do youth in custody report reliably?

Finally, the importation variable 'type of offence' (violent/non-violent) may raise doubt in its power to inform whether or not a youth was violent prior to custody. It is possible that a youth committed a non-violent offense at the time he was interviewed, but multiple violent offenses beforehand. Besides, no other information was used in the present study as indicators of the (violent) behavior of the youth prior to incarceration. In order to argue whether or not characteristics and experiences of youth in custody elevate the risk of youth being physical aggressive in custody, one must know more about the (violent) behavior of the youth prior to incarceration. Future studies should, therefore, examine the prior record of the

youth or the assessments of the youth completed by probation officers, which both will contain more information about their behavior prior to incarceration.

Finally, a serious limitation was the operationalization of perceived level of safety in this study, which was dependent on only one measure (“I feel safe from being physically assaulted by other inmates”). The use of only one measure results in the outcome variable being less specific. The use of only one measure of safety may have, therefore, resulted in the insignificant effects of the variables gender, race, prior incarceration history, type of offence, as well as history of sexual abuse, type of sentence, visitation, and victimization, in predicting perceived level of personal safety, which is inconsistent with earlier research. However, it should not be neglected that a large majority (68%) of the youth in this study perceived high levels of personal safety, which can also account for the latter insignificant results. Nevertheless, more measurements will improve the validity of a dependent variable, and are therefore desired in future research. Finally, a greater sample size would be highly desired, in order to increase reliability and predictive accuracy.

### **Conclusion**

Despite the limitations of the present study, as mentioned above, overall this study contributes to a better understanding of youth’s adjustment to life in custody. The findings of the present study suggest that perceived level of violence, visitation from caregivers, age and history of physical abuse are critical in predicting adjustment to life in custody among serious and violent young offenders. While the results in this study suggest that the deprivation model is the most powerful of all three models in predicting adjustment, the latter four significant predictors also give, to some extent, support to the integrated model in the sense

that both characteristics of the institutional environment (perceived level of violence and visitation) as well as the characteristics of youth prior to incarceration (age and history of physical abuse) are critical in predicting how well youth adapt to their institutional environment. In addition, the deprivation model only accounted for approximately 34% of the total variance in predicting perceived level of safety and support, which still leaves 66% of the variance unexplained, which could possibly be predicted by strong importation variables. In regards to future research, it is suggested to take the interaction effects into account between the importation and deprivation characteristics, as this is expected to increase predictive accuracy (Wright, 1991).

In regards to policy development, this study suggests that minimizing institutional violence should be a high priority within custody centers in order to positively attribute to the adjustment of youth. Secondly, the significant effect of visitation from caregivers, suggests that custodial facilities may not only need to meet the challenges of identifying vulnerable youth but, should also focus on the contact between the family and the youth, as this is suggested to increase adjustment to life in custody. Family should therefore be fostered to visit their youth, if possible, and after deliberate consideration of the quality of the relationship between the youth and their family members. Finally, the significant effect of physical abuse prior to incarceration on adjustment, suggests that these youth should especially be monitored more carefully by correctional officers in light of their adjustment process, and in order to early identify those youth who are in greatest need for help.

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## Appendices

### Appendix 1: Questionnaire

## Simon Fraser University

### Information Sheet for Subjects

The aim of this research project is to examine how young offenders perceive their sentences in terms of fairness, procedural rights, special needs, reintegration into the community, deterrence, and recidivism. The research will be conducted by gathering socio-demographic information from court and corrections files of recently sentenced young offenders, and a survey questionnaire where youths are asked a series of questions pertaining to their views about the criminal justice system, the people involved in the criminal justice system, their sentences, mental health issues, and personal history.

After participating in the actual questionnaire, the interviewers will conduct a debriefing aimed at allowing you to discuss your survey experience, discuss any concerns you may have about the survey itself or the research project as a whole, provide alternative ways of making the experience more meaningful or beneficial to you, and providing any suggestions or recommendations that might improve the research instrument.

The researchers ensure complete confidentiality for all participating youths as prescribed by law. However, if you make a direct threat that you intent to harm yourself or someone else, the interviewer does have the right to inform the director of the institution. You will be asked to sign a consent form and you are guaranteed the right to withdraw from the interview process at any point.

Although this questionnaire asks you to speculate about your potential future criminal participation, there is no risk that any of the responses will be held against you in the future. The information provided by you will not be shown or communicated to anyone other than the two (2) primary researchers. Strict methods will be implemented to ensure that all information is kept confidential by law. In addition, your own speculation cannot be considered an actual admission of intent to commit a future offence.

The contact person at Simon Fraser University's School of Criminology for all matters concerning consent is \*\*\*. Any other inquiries concerning the project can be forwarded to \*\*\*

# Simon Fraser University

## Informed Consent by Subjects to Participate in a Research Project

The university and those conducting this project subscribe to the ethical conduct of research and to the protection at all times of the interests, comfort, and safety of subjects. The *Information Sheet for Subjects* together with this form and the information they contain are given to you for your own protection and full understanding of the procedures, risks, and benefits of the research. Your signature on this form will signify that you have received the *Information Sheet for Subjects* form which describes these procedures, risks, and benefits, that you have had an adequate opportunity to consider the information in the document, and that you voluntarily agree to participate in the project.

Having been asked by Dr. R. Corrado and I. Cohen of the School of Criminology of Simon Fraser University to participate in their research project, I have read the procedures specified in the *Information Sheet for Subjects*.

I understand the procedures to be followed and the risks and benefits of this research described on the *Information Sheet for Subjects* to me taking part.

I understand that if I make a direct threat that I intend to harm myself or someone else, the interviewer may inform the director of the institution.

I understand that I may withdraw my participation in this project at any time. Furthermore, I understand that once I have completed the questionnaire and the debriefing, my participation in this project is complete.

I also understand that I may register any complaint I might have about the research with I. Cohen or Dr. R. Corrado, the principal researchers, or with Robert Gordon, the Director of the School of Criminology at Simon Fraser University.

I may obtain copies of the results of this study, upon its completion, by contacting I. Cohen at the School of Criminology, Simon Fraser University, 8888 University Drive, Burnaby, B.C., V5A 1S6.

I have been informed that the research material will be held confidential by the principal researchers, Dr. R. Corrado and I. Cohen.

I agree to participate in this research project.

NAME (please print): \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

WITNESS: \_\_\_\_\_

DATE: \_\_\_\_\_

**Demographic Information**

(1) Gender: (1) Male: \_\_\_\_\_; (2) Female: \_\_\_\_\_

(2) Birth Date (day/month/year): \_\_\_\_\_

(3) Current Age at Disposition: \_\_\_\_\_

(4) What ethnic group do you belong to?

(1) Caucasian: \_\_ (2) Black: \_\_ (3) Aboriginal: \_\_ (4) Asiatic: \_\_ (5) Other: \_\_\_\_\_ (6) Indian: \_\_\_\_\_

***I would like to talk to you now about the offence or offences that you are currently here for.***

**Current Offence Profile**

(5) What were all the charges that resulted in this current conviction? (check all that apply) (PAGE 17) (if the youth answers "drug offence" circle whether this is for possession or for trafficking)

1. 1st Degree Murder	<input type="checkbox"/>	13. Theft/Attempted Theft Under \$5000	<input type="checkbox"/>
2. 2nd Degree Murder	<input type="checkbox"/>	14. Threats or Intimidation	<input type="checkbox"/>
3. Attempted Murder	<input type="checkbox"/>	15. Stalking or Harassment	<input type="checkbox"/>
4. Criminal Negligence Causing Death	<input type="checkbox"/>	16. Motor Vehicle Theft	
5. Manslaughter	<input type="checkbox"/>	17. Attempted Motor Vehicle Theft	
6. Sexual Assault	<input type="checkbox"/>	18. Vandalism	
7. Attempted Sexual Assault	<input type="checkbox"/>	19. Drug Offence: a) Possession b) Traffic	
8. Assault with a Weapon	<input type="checkbox"/>	20. Fraud	
9. Assault	<input type="checkbox"/>	21. Mischief	
10. Robbery/Attempted Robbery	<input type="checkbox"/>	22. Driving Offence	
11. B&E/Attempted B&E	<input type="checkbox"/>	23. Probation Violation/Breach Conditions	<input type="checkbox"/>
12. Theft/Attempted Theft Over \$5000	<input type="checkbox"/>		

**(6) Sentence:** (1) Probation \_\_\_\_\_

(2) Open Custody \_\_\_\_\_

(3) Secure Custody \_\_\_\_\_

(4) Community Service \_\_\_\_\_

(5) Other \_\_\_\_\_

**About the primary parental home:**

(7) Who do you consider to be your parents? \_\_\_\_\_

(8) Have your parents visited you in custody? (0) No: \_\_\_ (1) Yes: \_\_\_;

**(9) If Yes, How often:**

(1) Daily: \_\_\_; (2) Few times a week: \_\_\_; (3) Once a week: \_\_\_; (4) Few times a month: \_\_\_; (5) Once a month: \_\_\_; (6) Rarely: \_\_\_; (7) Less than 10x: \_\_\_; (8) More than 10x: \_\_\_

*Next I am going to ask you some questions about your relationships, and about any physical or sexual abuse that you may have experienced. Your responses will be kept confidential, and will not be held against you in the future.*

**Physical and Sexual Relationships and Abuse Profile**

(10) History of Physical Abuse: (0) No: \_\_\_ (1) Yes: \_\_\_;

(12) History of Sexual Abuse: (0) No: \_\_\_ (1) Yes: \_\_\_;

*I would like to finish the interview by asking you about your perceptions of prison and your prison experience so far. Your answers will be kept confidential and will not be used against you in the future.*

**157. Please state the extent to which you agree or disagree with the following statements**

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	<i>The number of heated arguments is a problem in this institution</i>	1	2	3	4	5
2	<i>Too many residents have objects that they intend to use as weapons in this institution</i>	1	2	3	4	5
3	<i>The number of assaults among residents are a problem in this institution</i>	1	2	3	4	5
4	<i>The number of sexual assaults are a problem in this institution</i>	1	2	3	4	5
5	<i>I feel safe from being physically assaulted by other residents</i>	1	2	3	4	5
6	<i>Staff are too quick to use physical force on residents in this institution</i>	1	2	3	4	5
7	<i>I go to staff members to talk about my problems</i>	1	2	3	4	5
8	<i>Correctional Officers are able to talk with me when I need them</i>	1	2	3	4	5
9	<i>Staff usually tell residents what is going on</i>	1	2	3	4	5
10	<i>Staff members are not interested or concerned about the needs of residents</i>	1	2	3	4	5
11	<i>Staff members catch and punish the real "trouble makers"</i>	1	2	3	4	5
12	<i>Staff members do their best to ensure that residents are protected from harm by other residents</i>	1	2	3	4	5
13	<i>I think staff members have had enough training to do their jobs well</i>	1	2	3	4	5
14	<i>I get along well with the staff at this institution</i>	1	2	3	4	5

-- **END OF INTERVIEW** -- Please ask the youth if they have any final questions or comments about this part of the interview. Please remind them that an interviewer will be contacting them in the next week to complete the second part of the interview. This interview will give them a chance to explain to us their opinions and their thoughts, and will focus on information about their personality style, their interpersonal relationships, and their individuality **End of Interview - Debriefing** Please ask the youth if they have any final questions or comments about the interview. Remind them that if they have any questions or concerns at a later time, they can talk to their case manager who will contact the project manager. Ensure that the youth is not upset or disturbed in any way; if they appear to be upset or disturbed, please ask if they would like to talk to a counsellor or another member of the prison staff. Remind them that everything they have told you today, with the exception of a threat of harm towards themselves or others, will be kept confidential. If they change their mind at a later time about having their information included in the project they can request that their information be taken out of the project.

## Appendix 2: Descriptives Physical Aggressive Behavior (N=63)

<b>Engages in physical aggressive behavior:</b>		
	<i>% No</i>	<i>% Yes</i>
<b>Control Variables</b>		
Gender:		
➤ Male	46,1 %	53,9%
➤ Female	46,6%	53,4%
Age at deposition:	Mean: 16,3 SD: 1,2	Mean: 16,1 SD: 1,3
Ethnicity:		
➤ Caucasian	47,3%	52,7%
➤ Aboriginal	42,3%	57,7%
Prior incarceration history	Mean= 5.22 SD=164.7	Mean=5.16 SD=211.83
<b>Importation Variables</b>		
Victim of physical abuse:		
➤ No	46%	54%
➤ Yes	47%	53%
Victim of sexual abuse:		
➤ No	46,2%	53,8%
➤ Yes	47,8%	52,2%
<b>Deprivation Variables</b>		
Kind of sentence:		
➤ Closed custody	50,6%	49,4%
➤ Open custody	44,2%	55,8%
Victimized in custody		
➤ No	45.5%	54,5%
➤ Yes	56.8%	43.2%
Perceived level of violence	Mean = 12,6 St.dev. 3,16	Mean=12,4 St.Dev 3,70
Times caregivers visit youth	Mean= 3,4 SD=1,37	Mean=2,9 SD=1,26

### Appendix 3: Descriptives Perceived Level of Support From Correctional Staff (N=63)

Perceived level of support		
Control Variables	Mean	SD
Gender:		
➤ Male	3,0	0,6
➤ Female	3,0	0,7
Age at deposition:		
➤ 12-14	2,2	0,6
➤ 15-16	2,1	0,5
➤ 17-19	2,1	0,7
Ethnicity:		
➤ Caucasian	3,0	0,6
➤ Aboriginal	3,0	0,6
Prior incarceration history:		
➤ 1-15	3,0	0,4
➤ 16-30	3,2	0,4
➤ 31-50	3,3	0,4
➤ 51-90	3,3	0,3
➤ >90	3,4	0,3
<b>Importation Variables</b>		
Most Serious Current offence:	2,9	0,6
➤ Violent	3,1	0,6
➤ Non-Violent		
Victim of physical abuse:	3,1	0,6
➤ No	2,9	0,6
➤ Yes		
Victim of sexual abuse:	3,1	0,6
➤ No	2,9	0,7
➤ Yes		
<b>Deprivation Variables</b>		
Kind of sentence:		
➤ Closed custody	2,9	0,7
➤ Open custody	3,0	0,5
Victimized in custody		
➤ No	3,0	0,6
➤ Yes	3,1	0,7
Perceived level of violence:		
➤ 1 Extremely low	3,3	0,3
➤ 2	3,1	0,5
➤ 3	2,9	0,6
➤ 4 Extremely high	2,5	0,6
Times caregivers visit youth:		
➤ Daily	3,3	0,3
➤ Few times a week	3,0	0,5
➤ Once a week	2,8	0,6
➤ Few times a month	3,2	0,6
➤ Once a month	2,7	0,6
➤ Rarely	3,4	0,5

#### Appendix 4: Descriptives Perceived Level of Personal Safety (N=63)

Perceived Level of Personal Safety		
Control Variables	Mean	SD
Gender:		
➤ Male	2,2	1,1
➤ Female	1,9	1,2
Age at deposition:		
➤ 12-14	3,0	1,4
➤ 15-16	2,1	1,1
➤ 17-19	1,9	1,1
Ethnicity:		
➤ Caucasian	3,03	0,6
➤ Aboriginal	2,99	0,6
Prior incarceration history:		
➤ 1-15	3,1	0,6
➤ 16-30	3,2	0,6
➤ 31-50	3,2	0,6
➤ 51-90	2,9	0,6
➤ >90	2,9	0,7
<b>Importation Variables</b>		
Most Serious Current offence:		
➤ Violent	3,0	0,6
➤ Non-Violent	3,0	0,7
Victim of physical abuse:		
➤ No	2,9	0,6
➤ Yes	3,2	0,6
Victim of sexual abuse:		
➤ No	3,0	0,6
➤ Yes	3,2	0,7
<b>Deprivation Variables</b>		
Kind of sentence:		
➤ Closed custody	3,0	0,7
➤ Open custody	3,0	0,6
Victimized in custody		
➤ No	3,1	0,6
➤ Yes	3,0	0,7
Perceived level of violence:		
➤ 1 Extremely low	3,6	,5
➤ 2	3,3	,7
➤ 3	3,1	,5
➤ 4 Extremely high	2,9	,8
Times caregivers visit youth:		
➤ Daily	3,25	1,77
➤ Few times a week	3,07	,55
➤ Once a week	2,81	,57
➤ Few times a month	2,97	,58
➤ Once a month	2,80	,55
➤ Rarely	3,16	,68

