COLORADO DEPARTMENT OF CORRECTIONS

Internal Classification in the Colorado Department of Corrections

Prepared by
Laura Engleman, Office of Planning and Analysis
Stacy Newland, Office of Planning and Analysis
Heather Wells, Office of Planning and Analysis
Kelli Klebe, University of Colorado at Colorado Springs
Maureen O'Keefe, Office of Planning and Analysis

Tony Carochi
Interim Executive Director

Kevin Milyard
Interim Director of Prisons

Maureen O'Keefe
Research Director

April 2013

Table of Contents

Internal Classification in the Colorado Department of Corrections

Executive Summary

Correctional institutions historically have used external classification systems to determine the security and custody level of an offender's placement. Methods of internal classification—determining housing, programming, and work assignments within a facility—often have been more informal, subjective, less standardized, and more inconsistent. Inmate assaults and subsequent litigation in many states, along with an increased emphasis on offender rehabilitation, have highlighted the need for structured internal classification systems to complement existing mechanisms for external classification.

The goal of the current study was to

- review the literature to investigate predictors of inmate violence and victimization;
- explore existing empirically derived internal classification systems as well as instruments created by individual states;
- analyze retrospective assault data in the Colorado Department of Corrections (CDOC) to identify variables that may be able to predict which offenders are more likely to be perpetrators and which offenders are more likely to be victims.

Literature Review

An effective classification system has been termed the "brain" of prison management (Hardyman, Austin, Alexander, Johnson, & Tulloch, 2002). External classification methods are primarily concerned with security. Risk-assessment measures including factors such as criminal history, offense status, prior assaultive or escape behavior, and other prison adjustment variables are used to determine an inmate's custody level (i.e., minimum, medium, close, or maximum; Clements, 1996) and the facility where he/she should be housed. Once a facility is designated, the internal classification process ideally should assign offenders to cells, programs, and work duties commensurate with their psychological profile and program needs (Hardyman et al., 2002).

The mind-boggling challenge is to categorize a heterogeneous mix of offenders into similar subgroups that will minimize conflict and maximize opportunities for treatment, education, and jobs. Although it may seem easier to treat all offenders alike, they clearly are not. Van Voorhis (1988) observed that her data underscore the need for differential treatment of offenders and should dispel notions about the nature of the "criminal mind" or that "adult, male, inmate populations are made up primarily of psychopathic, character disordered, subcultural, or manipulative personalities" (p. 121). The default approach often has been classification decisions based on risk and available space (Clements, 1981; Levinson, 1982; Quay, 1984) or convenience (Van Voorhis, 1994). Even if facilities use classification systems, they are, as Clements (1996) pointed out, "necessarily somewhat blunt instruments" that lack

the sensitivity of individualized psychodiagnostic assessments (p. 123). Correctional facilities today may use empirically derived internal classification systems based on personality or behavioral taxonomies (e.g., Megargee, 1994; Quay, 1984) or create their own measures based on correctional experience, external classification factors, or instruments used in other states. The goal is to reduce inmate conflict by separating suspected predators from potential prey.

Method

- A random sample of 500 Code of Penal Discipline violations (COPDs) for adult male inmate-on-inmate murder, manslaughter, assault, sexual abuse, and rape was identified from a sample of 650 COPDs that occurred between July 1, 2010, and May 31, 2012.
- COPDs were matched with reportable incidents (RI) to obtain details including perpetrator, victim, location, time of day, use of weapon, etc.
- A comparison group of 500 adult male offenders from the general population was identified, removing known victims and perpetrators.
- Data on the offender samples were obtained from the CDOC computer information system on variables relevant to inmate violence and victimization, based on the literature review (e.g., age, height, weight, custody level, criminal history, gang affiliation, etc.).

Results and Recommendations

- Most of the incidents (*N* = 500)
    - were non-sexual (71%);
    - involved injury (37.4%) or injury was unknown (37.9%);
    - did not involve a weapon (48.9%) or weapon was unknown (40%);
    - did not clearly involve cellmates, although the data were limited (only 5.9% were marked yes; 83% were unknown);
    - commonly occurred between 5 p.m. and midnight (42%) in a cell (24.4%) or cell house (14.4%); 32.6% were in an unknown location;
    - were judged serious (57.9% rated as a 2 on a scale of 1 to 3).
- The combination of variables *overall* was able to correctly distinguish perpetrators from the general population 78% of the time, with 596 cases included in the analysis; however, inmates in the general population were correctly classified 83% of the time, meaning that nonperpetrators were incorrectly classified as perpetrators 17% of the time. Similarly, the regression model distinguished victims from the general population *overall* 75% of the time, with 613 cases included in the analysis; inmates in the general population were correctly classified 88% of the time, meaning that nonvictims were incorrectly classified as victims 12% of the time.
- *Perpetrators and victims* were significantly different from each other on blue card predator; mental health, medical, sex offender, substance, vocational, and anger needs; ethnicity; gang affiliation; sexual assault and weapons convictions; and age; *perpetrators and the general population* were significantly different from each other on initial custody level; blue card predator and victim; mental health, academic, substance, vocational, and anger needs;

ethnicity; gang affiliation; assault and robbery convictions; age; number of class 1 or 2 COPDs; and Level of Supervision Inventory-Revised (LSI-R) score; *victims and the general population* were significantly different from each other on initial custody level; blue card predator and victim; mental health and sex offender needs; age; gang affiliation; number of class 1 or 2 COPDs; and LSI-R score.

- A limitation of this research was potentially questionable data on sensitive variables believed to be relevant to internal classification, such as sexual orientation and prior sexual victimization collected for the SVR, and the ability to collect accurate and thorough incident data. As a result, identifying the victim sample for this study was extremely difficult, with data that were spotty at best.
- Recommended next steps would include improving the collection of incident data in the RI system, particularly the identification of victims; linking the COPD and RI systems; drafting a new internal classification instrument incorporating the variables identified as significant in the current study and/or adopting items from instruments used in other states; and implementing the instruments, monitoring its effectiveness, and modifying as data become available.

Introduction

"The degree to which [the absence of a functioning classification system] impedes the attainment of any proper objectives of a penal system cannot be overstated." —Chief Judge Johnson, Alabama (*Pugh v. Locke,* 1976: 325, as cited in Clements, 1981, p. 28).

"…an internal management classification system…separates the good guys from the bad guys when everybody is wearing a black hat."—Quay, 1984

Correctional institutions historically have used external classification systems to determine the security and custody level of an offender's placement. Methods of internal classification—determining housing, programming, and work assignments within a facility—often have been more informal, subjective, less standardized, and more inconsistent. Inmate assaults and subsequent litigation in many states, along with an increased emphasis on offender rehabilitation, have highlighted the need for structured internal classification systems to complement existing mechanisms for external classification.

Certainly the threat of civil liability has been one impetus behind internal classification approaches (Vaughn, 1996). Class action suits against large state prison systems in the 1970s and 1980s cited arbitrary, unsystematic, or absent classification systems as aggravating the problems caused by overcrowding (Clements, 1996). In 1994, the U.S. Supreme Court's decision in *Farmer v. Brennan* (1994) held strong implications for internal classification when it set the legal standard for prison assault cases ("deliberate indifference") and explicitly recognized prisoner rape as a violation of the Eighth Amendment's "cruel and unusual punishment" provision (Stop Prisoner Rape [SPR], 2006; Vaughn, 1996). In analyzing the decision, Vaughn (1996) noted that liability against prison officials can be divided into four categories linked to poor prison management. These include failure to (a) implement classification decisions and segregate aggressive and vulnerable inmates, (b) provide promised protection to an inmate, (c) protect an inmate on an enemy hit list, and (d) enforce court orders and consent decrees mandating protection for vulnerable inmates. Nearly 10 years after the *Farmer* case (in 2003), the first federal law addressing prisoner rape, the Prison Rape Elimination Act (PREA), was passed (SPR, 2006).

An effective classification system has been termed the "brain" of prison management (Hardyman, Austin, Alexander, Johnson, & Tulloch, 2002). External classification methods are primarily concerned with security. Risk-assessment measures including factors such as criminal history, offense status, prior assaultive or escape behavior, and other prison adjustment variables are used to determine an inmate's custody level (i.e., minimum, medium, close, or maximum; Clements, 1996) and the facility where he/she should be housed. Once a facility is designated, the internal classification process ideally should assign offenders to cells, programs, and work duties commensurate with their psychological profile and program needs (Hardyman et al., 2002).

The mind-boggling challenge is to categorize a heterogeneous mix of offenders into similar subgroups that will minimize conflict and maximize opportunities for treatment, education, and jobs. Although it may seem easier to treat all offenders alike, they clearly are not. Reporting on the pilot phase of her major cross-classification study, Van Voorhis (1988) said her data underscore the need for differential treatment of offenders and should dispel notions about the nature of the "criminal mind" or that "adult, male, inmate populations are made up primarily of psychopathic, character disordered, subcultural, or manipulative personalities" (p. 121). The default approach often has been classification decisions based on risk and available space (Clements, 1981; Levinson, 1982; Quay, 1984) or convenience (Van Voorhis, 1994). Even if facilities use classification systems, they are, as Clements (1996) pointed out, "necessarily somewhat blunt instruments" that lack the sensitivity of individualized psychodiagnostic assessments (p. 123).

Predictors of Inmate Misconduct

Although internal classification addresses program and work assignments in addition to housing, the latter is of paramount concern, given prisons' overriding need to maintain security. Prisons often do not have the space to avoid double-bunking inmates, and the potential for assault is increased if cellmates are not paired carefully. In *Withers v. Levine* (1980), a former victim of sexual assault was housed with a sexually aggressive offender who raped his new roommate at knife point during their first night together (Vaughn, 1996). In *Wade v. Haynes* (1981), an 18-year-old small-framed inmate under special protection was beaten and sexually assaulted when placed into administrative segregation with two other inmates, one of whom was known to have aggressive behavior (Vaughn, 1996). Advocating single-cell occupancy to protect inmates and afford them privacy, Adwell (1991) cited the complex list of multiple variables that must be considered by classification committees. Even the best of classification systems may be overwhelmed by the inevitable problems that arise from individuals living in close proximity for extended periods of time.

Nevertheless, research provides a starting point, if not a failsafe formula. Particular variables have been shown over time to predict, with varying degrees of certainty, the likelihood of prison violence. These variables can be divided into the categories of inmate characteristics, environmental factors, and management practices and the intricate interaction among them. Inmate characteristics that appear to predict increased prison violence include:

- race (i.e., non-Caucasian; Cao, Zhao, & Van Dine, 1997; African Americans and Hispanics are less likely to commit drug and alcohol offenses and more prone to assaults; Steiner & Wooldredge, 2008)
- gender (i.e., women are less likely to commit violence; Harer & Langan, 2001)
- younger age (Cao et al., 1997; Cunningham & Sorensen, 2006; Gendreau, Goggin, & Law, 1997; Steiner & Wooldredge, 2008)
- less education (Cao et al., 1997)
- offense category (i.e., property offenders rather than convicted murderers; Cunningham, Sorensen, & Reidy, 2005; Sorensen & Cunningham, 2010)
- antisocial attitudes (Gendreau et al., 1997)

- shorter prison sentences (Cunningham et al., 2005; Cunningham & Sorensen, 2007)
- criminal history (Gendreau et al., 1997; Steiner & Wooldredge, 2008)
- prior prison violence (Cunningham & Sorensen, 2007)
- prison gang affiliation (Cunningham & Sorensen, 2007)

Cunningham and Sorensen (2006) note that the emphasis on importation factors (variables the offender brings with him into prison) is a weakness of many risk assessment instruments and that such factors are only one leg of a triad including deprivation factors (hardships associated with imprisonment) and situational factors. Psychologists call it the fundamental attribution error, or the tendency to attribute shortcomings to a person's character rather than the circumstances (Grinnell, 2012). Environmental factors shown to predict increased prison misconduct include inmate overcrowding (Gaes & McGuire, 1985), fewer offenders participating in programming or prison work assignments (Huebner, 2003), and a diet lacking in vitamins, minerals, and essential fatty acids (Gesch, Hammond, Hampson, Eves, & Crowder, 2002). Steinke (1991) found a relationship between temperature (heat) and aggression and that violence was less likely to occur in structured activities such as work and school. Offenders randomly assigned to higher security facilities also are more likely to commit prison misconduct irrespective of their initial risk classification (Bench & Allen, 2003; but see Camp & Gaes, 2005).

Finally, prison management that employs a balance of control (strict rules and punishment) and inmate freedom with incentives appears to achieve the greatest reduction in prison misconduct (Wright, 1994). In addition, prisons that involve a large proportion of their inmate population in educational, vocational, and prison industry programs demonstrated lower rates of violence against inmates and staff (Gaes & McGuire, 1985; McCorkle, Miethe, & Drass, 1995). Further, Patrick (1998) reported that inmate-staff assaults were related to the extent of social integration and relationships with other inmates as well as the extent to which correctional staff were viewed as a physical threat to the inmate. The above studies notwithstanding, Cunningham and Sorensen (2007) warn correctional officials not to put too much faith in the ability of any risk instrument to predict prison violence: "Although identifying readily discernible factors has an important role in the targeting of security resources and programming, it is unlikely that a risk model based on factors at admission can be developed that will identify a 'more likely than not' probability of serious institutional violence. This is a function of not only the low base rates, but also the multiple contributors to prison violence beyond 'person' variables….Serious violence in prison, as in other settings, is thus a function of person-interpersonal-context variables that are difficult to anticipate" (p. 251).

In addition to the above factors associated with prison misconduct/violence/aggression, other variables have demonstrated a relationship to whether an inmate will be victimized (sexually or physically). These include:

- youth (a characteristic of predators as well; Austin, Fabelo, Gunter, & McGinnis, 2006; Hensley, Tewksbury, & Castle, 2003)
- older age (over 50; Kerbs & Jolley, 2007)
- weakness and vulnerability (Lockwood, 1980; Wolff, Shi, Blitz, & Siegel, 2007)

- mental illness (Austin et al., 2006; Wolf et al., 2007)
- physical attractiveness and/or effeminate traits (Chonco, 1989; Lockwood, 1980)
- small stature (Jenness, Maxson, Matsuda, & Sumner, 2007; Lockwood, 1980; Toch, 1977)
- sexual orientation (Jenness et al., 2007; Struckman-Johnson & Struckman-Johnson, 2006)
- protective custody (Barak-Glantz, 1982; Lockwood, 1980)
- gang membership (Fischer, 2002; but see Jenness et al., 2007) or perceptions of gang activity (Wolff et al., 2007)
- nonviolent first offense (Chonco, 1989; SPR, 2006; but see Beck & Harrison, 2010)
- fear (Chonco, 1989)
- Immigration and Customs Enforcement detainee (SPR, 2006)
- snitch (Kupers, 2005)
- perpetrator of violent sex offense (Beck & Harrison, 2010)
- sexual victimization history (Beck & Harrison, 2010; Wolff et al., 2007)
- enemy hit list (Vaughn & del Carmen, 1993)
- long sentence (20 years or more; Beck & Harrison, 2010)

Prevalence Rates

Wolff and Shi (2009a) estimate the rate of sexual assaults in male prisons during a 6-month period to be 2 out of 100 and 10 times that number for physical assaults (including inmate-on-inmate and staff-on-inmate). Gaes and Goldberg's (2004) meta-analysis put the rate of sexual assault during a lifetime of incarceration at 1.9%. According to the Bureau of Justice Statistics (BJS), 4.4% of prison inmates and 3.1% of jail inmates reported one or more incidents of sexual victimization between October 2008 and December 2009. Of all state and federal offenders polled, 2.1% reported an incident involving another inmate (e.g., nonconsensual sexual acts or unwanted genital touching) and 2.8% involving staff sexual misconduct (Beck & Harrison, 2010). However, another BJS survey among *former* state prisoners estimated a higher rate: 7.5% of former prison inmates said they had been victimized during their most recent incarceration; 5.4% reported an incident involving another inmate and 5.3% involving staff (Beck & Johnson, 2012). Rates of physical victimization (i.e., assault or theft) are estimated at 1 to 2 incidents during a 6-month period (Wolff & Shi, 2009b). In the Colorado Department of Corrections (CDOC) during fiscal year 2011, there were 401 inmate-on-inmate physical assaults, 255 inmate-on-staff assaults, 3 inmate sexual assaults on inmates, and 5 inmate deaths by homicide (Barr, Gilbert, & O'Keefe, 2012).

Based on a survey of 81,566 inmates, the BJS concluded that the combined effects of sexual orientation and prior sexual victimization most strongly predicted inmate-on-inmate victimization compared to all other characteristics. An inmate's race (black), age (20-24), and education (college degree or more) increased the probability of staff sexual misconduct when other factors were controlled (Beck & Harrison, 2010). Other research offers a mixed perspective on the role of race. Although white inmates historically have been victims of inmate sexual assault more often (Hensley et al., 2003; Struckman-Johson & Struckman-Johnson, 2000), a recent large-scale study reported that black offenders were twice as likely to be sexually victimized by staff (Wolff, Shi, & Blitz, 2008). Jenness et al. (2007) found that all

racial/ethnic groups had been sexually victimized. Regarding physical victimization, consistent racial patterns have not been found in recent studies (Wolff & Shi, 2009a).

Sexual assaults most often occur in victims' cells and dorms as well as bathrooms at night, specifically between 6 p.m. and midnight (Beck & Harrison, 2010; Jenness et al., 2007). Physical assaults tend to occur between noon and midnight (with the most between noon and 6 p.m.) in cells (both inmate and staff perpetrators) or yards (inmate perpetrators only; Wolff & Shi, 2009a). Large population size, racial conflict, barracks housing, inadequate security, and a high percentage of inmates imprisoned for a crime against persons appeared to increase the rate of sexual coercion (Struckman-Johnson & Struckman-Johnson, 2000).

Given the high probability that official statistics of inmate victimization are underreported (particularly for sexual assaults), researchers warn that statistical profiling may be "virtually impossible" in some cases (Austin et al., 2006), provide only broad generalizations about group characteristics (Clements, 1981), and serve little purpose without reliable monitoring and accountability (Wolff et al., 2007). Predictor variables are far from perfect; Wolff et al. (2007) noted that only a small percentage of inmates with the characteristics found in the literature reported incidents of sexual victimization. The authors advocate measurement tools that "capture the conjoint probabilities of risk markers" and customized profiles for state systems (Wolff et al., 2007, p. 553). In sum: "What appears to be lacking here is not evidence nor recommendations but the existence of a state mandate that requires the implementation of classification schemes that incorporate risk factors for sexual victimization into placement strategies and that monitors victimization rates inside prisons using scientific methods that enhance reliable and accurate reporting" (Wolff et al., 2007, p. 552).

Existing Instruments

The concept of internal classification originated with juvenile offenders and later expanded to the adult level (Levinson, 1988). More than a century ago, the 1896 "yearbook" of the New York State Reformatory at Elmira pictured "specimens" such as "Mathematic Dullards, Those Deficient in Self-Control, and Stupids" (Clements, 1981, pp. 15-16). Correctional facilities today may use empirically derived internal classification systems based on personality or behavioral taxonomies (e.g., Megargee, 1994; Quay, 1984) or create their own measures based on correctional experience, external classification factors, or instruments used in other states. The goal is to reduce inmate conflict by separating suspected predators from potential prey.

Personality Typologies

- **Adult Internal Management System (AIMS):** Perhaps the best known internal classification instrument is the AIMS, developed by Herbert Quay (1984) nearly 30 years ago. The AIMS classifies inmates based on the results of the correctional adjustment checklist completed at the end of the admission period by a correctional officer (41 items that focus on inmates' behavior

in prison, including their record of misconduct, ability to follow staff directions, and level of aggression toward other inmates) and the life history checklist completed by a caseworker (27 items that focus on inmates' stability while in the community and personality dimensions related to their ability to live successfully with other types of inmates). The original AIMS divided inmates into five personality types (aggressive-psychopathic, manipulative, situational, inadequate-dependent, and neurotic-anxious); these designations were later revised as Alpha I and II (also called Heavies and most likely to be threats/predators), Kappa (also called Moderates and least problematic), and Sigma I and II (also called Lights and non-assaultive but disruptive; most likely to be victimized; Hardyman et al., 2002; Levinson, 1988). In the AIMS schema, Heavies should be housed in the most secure area and should never cohabit with Lights. Use of the AIMS has resulted in statistically significant reductions in inmate-on-inmate and inmate-on-staff violence over time within institutions and compared to other institutions not using the AIMS (Levinson, 1988; Quay, 1984). Quay's (1984) research assumed that any other variables related to inmate violence were randomly distributed among the institutions studied. Although Van Voorhis' (1994) study indicated that the AIMS' interrater reliability was somewhat low (67%), she suggested that it might be higher in smaller prison systems (compared to the Terre Haute, Indiana, Federal Penitentiary and Federal Prison Camp where her research was conducted) and would benefit from a detailed manual. Nevertheless, inmate types generally correlated with behaviors in the expected direction (Van Voorhis, 1994).

- **Minnesota Multiphasic Personality Inventory (MMPI)-Based Criminal Classification System:** This instrument was developed by Edwin Megargee and colleagues based on the results of the MMPI, a widely used psychodiagnostic tool. Offenders are classified into 10 types with neutral names such as Able, Baker, and Charlie. Ables, for example, are described as charming, impulsive, manipulative, achievement-oriented, and likely to adjust well to incarceration. Charlies are hostile, misanthropic, alienated, aggressive, and antisocial, with a history of poor adjustment, criminal convictions, and substance abuse (Van Voorhis, 1994). The Megargee method later was adapted to the second version of the MMPI, the MMPI2. Zager (1988) concluded that the system overall demonstrated reliability, validity, and practical utility. However, Van Voorhis (1994) found fewer correlates with adjustment behaviors and treatment-related experiences for this system compared to others.

Cognitive-Developmental Typologies for Juveniles

- **Interpersonal Maturity (I-Level) and Jesness Inventory I-Level:** The I-level (Integration Level) was developed by Marguerite Warren for juveniles, using a developmental scheme of increasing interpersonal maturity. Offenders are classified into five levels, with three personality subtypes for three of the levels. An individual at the second level, for example, is very immature and sees others solely as sources of gratification. Subtypes at that level are asocial passive and asocial aggressive. The Jesness system is considered an actuarial method of assessing the I-level, yielding scores on 11 trait scales (e.g., social maladjustment) and 9 scales that correspond to the I-level subtypes. Reliability of the I-level was questionable in Van Voorhis' (1994) study,

although it was able to predict some disciplinary and adjustment-related behaviors. Van Voorhis (1994) did not test the reliability of the Jesness, deferring to the authors' previous research on reliability; the tool did, however, show evidence of construct validity.

- **Conceptual Level:** This system ranks juveniles according to four levels of increasing conceptual complexity, social maturity, self-responsibility, and independence. At the lowest level, for example, individuals are self-centered and react with hostility or withdrawal when their wants are not met. Construct validity for this measure was strong in Van Voorhis' (1994) study; i.e., the method identified types that correlated positively with comparable developmental stages able to distinguish different categories of offenders.

Case Management and Behavioral Systems

- **Prisoner Management Classification (PMC):** Also called Client Management Classification (CMC), this approach uses a 45-minute semistructured interview dealing with clients' attitudes about their offense, offense history, family, interpersonal relationships, current problems, and future plans, along with objective background factors and behavior ratings to classify offenders. Inmates are assigned to one of four groups: limited setting (LS), casework control (CC), selective intervention (SI), and environmental structure (ES). LS and CC inmates, deemed more aggressive, should be separated from SI and ES offenders, who require minimal supervision (Hardyman et al., 2002; Lerner, Arling, & Baird, 1986). The PMC has demonstrated utility in managing correctional populations but requires significant staff training (Hardyman et al., 2002).
- **Behavior-Based Systems:** Some states have developed internal classification systems that group inmates by behavioral measures gleaned from disciplinary records and work performance. The advantages of such systems are their structured and dynamic nature. Hardyman et al.'s (2002) case studies described a behavior-based system used by the Illinois Department of Corrections in its three maximum-security facilities. Factors included were level of aggression (determined by the severity and frequency of disciplinary conduct and gang-related activities) and items used in most external classification systems, such as current offense and age. Although no data on Illinois were available in Hardyman et al.'s (2002) report, other states that pilot-tested behavior-based systems (Florida, New Jersey, and Oregon) reported mixed results.

What Other States Are Doing

According to a 1994 survey by the National Council on Crime and Delinquency, only nine states had a formal internal classification system (Alexander et al., 1997, as cited in Hardyman et al., 2002). At the time of a 1998 survey by the Association of State Correctional Administrators, many state departments of corrections did not record sufficient data for classification purposes: 12 departments did not collect information on the severity level of prior offenses and 17 did not record information on habitual offenders. In making classification decisions, 15 states did not collect risk assessment scores and 26 did not record psychological indices. Although interest in objective classification systems is growing, the

tools used vary widely, ranging from pre-existing internal classification instruments (described earlier) to those created by state correctional agencies specifically for their populations.

Classification systems may be based on convenience or cost and ease of administration. Although those criteria are understandable, Van Voorhis (1994) notes that issues of reliability and validity, along with norming systems for specific populations, may be ignored. Following are brief summaries of internal classification instruments developed in a selection of states. See Table 1 for a list of key variables used to identify predators and victims.

Kansas

Kansas developed an internal classification system that was approved but never implemented when the Secretary and Deputy Secretary of Facilities retired in 2010 (D. Riggin, personal communication, February 1, 2012). Criteria were derived from other states' instruments (e.g., Nebraska, Iowa, and Wyoming), PREA standards, and issues that had arisen in prison lawsuits (e.g., inmate weight and size). Previous internal classification decisions had been largely subjective and were "fragmented, inconsistent from one facility to another and largely undocumented" (Kansas Department of Corrections, 2010).

Massachusetts

Massachusetts began investigating its informal classification system in 2008 when its department of corrections sought to double bunk maximum security inmates. According to Carol Mici, assistant deputy commissioner of classification, staff found that the AIMS, used in three of its facilities, lacked reliability and validity and the PMC required extensive training. Therefore, the department created its own instrument (now automated) based on a review of behavior-based systems, dynamic factors, correctional experience, and PREA standards. Implementation of the new cell-matching system and mission changes (i.e., violent inmates transferred to a different facility) resulted in a shift in the number of assaults from one facility to another but a total overall decrease (Montgomery, 2011).

Missouri

Missouri began using the AIMS in 1987 but later, along with South Dakota, refined it as the Adult Internal Classification System (AICS). The AICS classifies inmates into three types: assaultive (X), independent (Y), and vulnerable (Z), based upon checklists similar to the life history and correctional adjustment checklists in the AIMS. The primary distinction between the AIMS and the AICS is that the inmate's personality type designation is not assumed to be static; reclassification is conducted annually, weighing more heavily on recent institutional adjustment and changes in behavior. Hardyman et al.'s (2002) study found that AICS scores had low interrater reliability, and the state is embarking upon another review of the system. David Oldfield, director of research and evaluation for the Missouri Department of Corrections, said the AICS had a better association with offender aggressive behavior

than the AIMS, but there was a great deal of variation in scoring. In addition, the small number of vulnerable offenders decreased the applicability of AICS regarding housing assignments, causing a conflict in only 1.4% of cell assignments for institutions with the highest rates of assaultive and vulnerable offenders. An analysis of the AICS further indicated that while assaultive offenders represented 50% of aggressive conduct violations, only 8% of victims were classified as vulnerable offenders. In other words, AICS did not appear to be an effective way of identifying victims (Missouri Department of Corrections, 2008). Age, race, and offense alone also were not shown to be good indicators of future assaultive behavior, and Missouri researchers concluded that a revised AICS-type questionnaire would be necessary. A survey of Missouri's neighboring states showed that most did not use formal systems incorporating psychological/personality testing (Mieir & Oldfield, 2007).

Ohio

The Ohio Department of Corrections created an internal classification screening sheet to place offenders in appropriate housing units at its close security Ross Correctional Institution (RCI). Offenders are divided into three groups: vulnerable or passive, aggressive or predatory, and those who fall in between, so that similarly identified inmates can be housed together Staff reviewed the AIMS and Cunningham and Sorensen's (2007) study on predictors of violence in close custody to select appropriate criteria, and housing assignments are based on offenders' scores on the screening instrument. According to Rob Jeffreys, bureau chief of classification, the screening has resulted in a 38% decrease in inmate-on-inmate assaults, calculated from the department's incident-tracking system (personal communication, February 7, 2012).

South Carolina

As part of the *Nelson v. Leeke* (1985) lawsuit settlement, South Carolina became the first state to use an objective, systemwide internal classification method—the AIMS (Levinson, 1988). The AIMS has been replaced by a cell assignment system modeled after one used in Texas in 1996. A facility's institutional classification committee including the unit lieutenant and the classification caseworker review an inmate's record and consider criteria such as age, height, weight, and violent or passive tendencies when completing a cell assignment form. The form is updated each time an inmate moves (J. Scarborough, personal communication, February 2, 2012).

South Dakota

Although the South Dakota Department of Corrections worked with Missouri to develop the AICS as part of the Hardyman et al. (2002) study, the state is currently using the AIMS (L. Feiler, personal communication, January 26, 2012). Laurie Feiler, deputy secretary, said the AICS was less accurate than the AIMS in identifying inmates prone to aggressive behavior and was less reliable. The department's

policy also states that other considerations such as work and program assignments may take precedence when cell assignments are made at minimum custody facilities.

Wyoming

Patricia Hardyman has created an internal classification system for the Wyoming Department of Corrections that was redesigned and revalidated in June 2012 to inform the housing needs of both males and females across all custody levels. The aggression assessment considers five gender-specific factors: most serious felony conviction, current age, institutional behavior during the last 60 months, aggressive interactions, and institutional aggression. Based on inmates' scores, weighted differently for males and females, they are categorized into three groups: altus (high aggression), medius (moderate aggression), and brevis (low aggression). A separate vulnerability designation of known victim, potential victim, or nonvictim is based on eight (for females) to nine (for males) factors similar to those found on other instruments and consistent with many PREA standards (e.g., mental or physical disability, young age, prior sexual victimization, etc; see Table 1; Hardyman, 2005, 2012). Hardyman's analyses found that, among men, the most significant predictors of aggression were disciplinary history and aggressive interactions. Among women, significant risk factors for aggression were current age, disciplinary history, and institutional aggression. A pilot test of the vulnerability assessment suggested that the most common predictors of vulnerability for institutional sexual assault were age and size, followed by sexual orientation, history of sexual activities while incarcerated, prior placement in protective custody, and developmental disability/mental health. Both aggression and vulnerability instruments are being used to determine housing assignments that separate inmates by custody level, aggression level, and vulnerability (e.g., altus separated from brevis and altus from known victims and potential victims; Hardyman, 2012). Anecdotal data on Wyoming's system are positive, although no statistics were available on whether or not it has reduced the rate of incidents.

Colorado

From 1993 through 2000, NIC funded a major study on internal classification systems (Hardyman et al., 2002). The three-phase goals were to field test systems in eight states (Connecticut, Washington, Colorado, Oregon, Florida, New Jersey, Missouri, and South Dakota); design, develop, and implement the systems; and, finally, evaluate them. In Colorado, Limon Correctional Facility (LCF) was chosen as the pilot site in 1994. The final report stated that the CDOC's Master Program Scheduling (MPS) system was chosen as the vehicle for achieving its internal classification objectives. During a follow-up visit in 2000, researchers reported that the system was working well and had resulted in a decrease in serious assaults. However, attempts to implement the system at other facilities were stalled due to training issues (Hardyman et al., 2002), and the process faltered at Limon as well.

Angel Medina, warden at LCF, explained that MPS is used extensively for work assignments and tracking programming (e.g., "7 Habits on the Inside" and "Thinking for a Change"). Otherwise, he indicated that

MPS is only indirectly related to the classification process as a follow-up to classification decisions. The training required and cumbersome nature of MPS (e.g., three separate steps in three screens are needed to make an assignment for one offender) are among the difficulties (A. Medina, personal communication, February 15, 2012). At other CDOC facilities, the method used for internal classification appears to be relatively subjective, informal, and inconsistent. As a result, the Department is in the process of creating a more structured internal classification instrument to be used for housing assignments.

Conclusion

The conclusion of NIC's ambitious internal classification initiative was that no single, specific model works for all states: "No distinct set of ideal, generalizable factors was identified to be included in an internal classification system. Instead, the critical risk factors, operational definitions, processes, and timing appeared to be unique to each state and dependent upon its specific goals, resources, and system composition. In other words, there is no 'best model,' nor should there be; instruments and processes must be tailored to and validated on the population for which they will be used" (Hardyman et al., 2002, p. xiv).

*Table 1. Variables included on states' internal classification instruments for male offenders**

Predatory/aggressive/violence factors	**States including item**
History of predatory behavior	KS[a], MA, MO[b], SD[b], CO[a]
Disciplinary conviction in prison	KS
History of domestic violence	MA, CO[a]
Current or prior high-severity offense	KS, WY
Any convictions for violent offenses	MA, SC, CO[a]
Psychotic, homicidal, sadistic, paranoid	KS
Institutional history of aggression	KS, MA, OH, SC, WY, CO[a]
STG member	KS, MA, OH, SC, CO[a]
History of prohibited institutional sexual activity	KS, MA, CO[a]
Victim/vulnerability factors	
History of victimization	KS, MA, SC, WY, CO[a]
23 or under; 65 or over	KS, MA, OH, WY, CO[a]
Small stature (5'6" or < and/or 140 lbs or <)	KS, MA, WY, CO[a]
Medical/mental health condition	KS, MA, MO, SC, SD, WY, CO[a]
Developmental disability	MA, WY, CO[a]
GID/sexual orientation/transgender	KS, MA, WY, CO[a]
Perception of vulnerability	KS, MA, CO[a]
First incarceration	KS, MA, OH, CO[a]
Nonviolent history	KS, MA, OH, CO[a]
Effeminate	MA, WY, CO[a]
History of protective custody placements	MA, SC, WY, CO[a]
History of institutional sexual activity	MA, SC, WY, CO[a]
Sex offender	MA, CO[a]

**This list is not all inclusive.*

[a]Initial draft instrument only

[b]Included on the AICS and AIMS checklists

Current Study

The goal of the current study was to determine variables that predict which adult male offenders in CDOC are more likely to be perpetrators/predators and which offenders are more likely to be victims of assault, in order to inform the department's internal classification policy. Specifically, certain factors in an offender's demographic profile, needs levels, criminal risk score, and criminal history may indicate which offenders should not be housed together in a facility. It is hoped that an evidence-based internal classification system will be able to minimize the incidence of assaults and enhance the safety of both offenders and staff.

Method

A random sample of 500 Code of Penal Discipline violations (COPDs) for adult male inmate-on-inmate murder, manslaughter, assault, sexual abuse, and rape was identified from 650 COPDs that occurred between July 1, 2010, and May 31, 2012, to obtain the date of each incident and the CDOC number of the perpetrator. COPDs were not recorded if they did not meet study criteria, such as those involving multiple-offender fights, incidents missing descriptions, on-staff and on-visitor assaults, and incidents that did not occur in a facility. To identify victims, each COPD was matched with a reportable incident (RI) that occurred on the same date involving the same offender. After reading the comment field in the RI, two student interns entered victim information on a data collection form. A subsample of 25-30 COPDs was reviewed by both students independently to ensure interrater reliability; only minor adjustments were necessary regarding the determination of incident seriousness. Details about the incidents also were recorded on the data collection form: location (cell, dining hall, yard, etc.); time of day; whether or not the incident was sexual or involved an injury or an object used as a weapon (excluding body parts); and whether the incident occurred between cellmates. The seriousness of the incident was indicated on a scale of 1 *(very serious)* to 3 *(not very serious).* Cases of murder and rape automatically were rated as very serious. For assaults, the most serious cases involved bodily injury; serious cases included hurling offensive substances; less serious cases included incidents such as throwing a food tray. For sexual abuse, the most serious cases involved penetration (including nonconsensual oral sex); serious cases included nonconsensual sex acts without penetration; less serious cases included kissing. In addition, students researched whether a victim also was charged with a COPD for the same incident.

Out of the 500 COPDs, there were 53 cases in which offenders were identified as both perpetrators and victims; those were excluded from the offender analysis. In the remaining 447 incidents, there were 404 perpetrators, as some were involved in multiple events. The number of identified victims, 266, was much lower, primarily due to fights in which there was no clear victim or COPDs with no matching RI to provide sufficient detail.

A comparison group of 500 male offenders from the general population also was selected, removing known victims and perpetrators (i.e., those identified in the study). Only male offenders were studied, as serious assaults among female offenders are far less frequent. A separate study on female offenders should be conducted at a later date.

Data on the offender samples were obtained from the Department of Corrections Information System (DCIS) tables on variables relevant to inmate violence and victimization, based on a review of the literature. Variables included were age, height, and weight; ethnicity; initial custody level during the offender's current incarceration; Level of Supervision Inventory-Revised (LSI-R) score; violent criminal history (with violent crimes defined as murder, manslaughter, homicide, robbery, kidnapping, assault, menacing, sexual assault, arson, weapons/explosives, and child abuse); serious crime convictions (i.e., murder, homicide, kidnapping, sexual assault, wrongs to children, assault, robbery, extortion, arson,

weapons, and menacing); number of class 1 and 2 COPDs, previous serious COPDs (i.e., murder, manslaughter, kidnapping, assault, riot, rape, arson, robbery, contraband, and drugs); offense degree; gang affiliation; needs levels (academic, vocational, mental health, anger, mental retardation and developmental disabilities, medical, substance level, self-destructiveness, and sex offender); incarceration number; length of time in CDOC prior to the incident; and lifetime sex offender status. "Blue card predator" and "blue card victim" variables were considered as well, referring to the document containing basic demographic, offense, and custody issue details on each offender, which is stored in the department's PCDCIS data system. The form is so named because the information was, at one time, recorded on a physical blue card. An offender's designation as a predator or victim is based on a combination of self-report data, reportable incidents, and other information verified by staff members. In addition, items and scores from the Sexually Aggressive Behavior (SAB) and Sexual Vulnerability Risk (SVR) instruments, which constitute the PREA measures, were included to provide information such as history of predatory behavior or victimization (prior sex offense convictions, institutional sexual assault, and sexual offense against a child), transgender or homosexual orientation, and fear of victimization.

Scores on the Coolidge Correctional Inventory (CCI; Coolidge, 2004) also were examined. The CCI is used by CDOC with new prison admissions to identify personality disorders and neuropsychological problems among inmates. The assessment follows a self-report format with a 4-point scale from 1 *(strongly false)* to 4 *(strongly true)* across 250 items. Scores are obtained for 33 different scales and subscales (Coolidge, Segal, Klebe, Cahill, & Whitcomb, 2009) based on the American Psychiatric Association's (2000) diagnostic criteria. For example, the CCI assesses six Axis I clinical syndromes, such as generalized anxiety disorder, major depressive disorder, and schizophrenia, and 14 Axis II personality disorders, such as antisocial, avoidant, borderline, paranoid, and sadistic. In a 2009 study, the median internal reliability for the CCI scales was .79 (Coolidge et al., 2009). For this study, scale scores were considered as potential predictors of outcomes, in addition to 14 questions related to sexuality that were scored individually.

Results

Incident Data

When characteristics of the incidents were examined (*N* = 500), results showed that most of the incidents

- were nonsexual (71%);
- involved injury (37.4%) or injury was unknown (37.9%);
- did not involve a weapon (48.9%) or weapon was unknown (40%);
- did not clearly involve cellmates, although the data were limited (only 5.9% were marked yes; 83% were unknown);
- commonly occurred between 5 p.m. and midnight (42%) in a cell (24.4%) or cell house (14.4%); 32.6% were in an unknown location;

- were judged serious (57.9% rated as a 2 on a scale of 1 to 3).

Statistically significant differences were found between physical and sexual assaults, such that more physical assaults than sexual assaults involved injury (45.9% vs. 3.2%, respectively) or a weapon (13.8% vs. 0%). More sexual assaults than physical assaults were between cellmates (18.3% vs. 2.9%, although most were unknown) in a cell (51.5% vs. 17.9%) and were rated as very serious (21.5% vs. 10.3%). There was no significant difference in time frame between the groups.

Comparison of Perpetrators, Victims, and the General Population

Descriptive analyses showed how perpetrators (*N* = 404), victims (*N* = 266), and a random sample of 500 offenders from the general population (excluding victims and perpetrators identified in the study) differed on demographic, needs, criminal risk, and criminal history variables. For example:

Known *perpetrators (p) and victims (v)* were significantly different from each other on:

- blue card predator (*p > v*)
- mental health (*v > p*), medical (*v > p*), sex offender (*v > p*), substance (*p > v*), vocational (*p > v*), and anger needs (*p > v*)
- ethnicity (*v > p,* Caucasian, other; *p > v,* African American, Hispanic)
- gang affiliation (*v > p,* none; *p > v,* member, associate, suspect)
- sexual assault (*v > p*) and weapons convictions (*p > v*)
- age (*v > p*)

Known perpetrators (p) and the general population (gp) were significantly different from each other on:

- initial custody level (*gp > p,* minimum, minimum-restrictive, medium; *p > gp,* close)
- blue card predator and victim (*p > gp*)
- mental health, academic, vocational, substance, and anger needs (*p > gp*)
- ethnicity (*gp > p,* Caucasian, other; *p > gp,* African American, Hispanic)
- gang affiliation (*gp > p,* none; *p > gp,* member, associate, suspect)
- assault and robbery convictions (*p > gp*)
- age (*gp > p*)
- number of class 1 or 2 COPDs (*p > gp*)
- LSI-R score (*p > gp*)

Known victims (v) and the general population (gp) were significantly different from each other on:

- initial custody level (*gp > v,* minimum, minimum-restrictive, medium; *v > gp,* close)
- blue card predator and victim (*v > gp*)
- mental health and sex offender needs (*v > gp*)
- age (*gp > v*)
- gang affiliation (*gp > v,* none, associate; *v > gp,* member, suspect)
- number of class 1 or 2 COPDs (*v > gp*)

- LSI-R score (*v* > *gp*)

For a complete table of differences between known perpetrators, known victims, and the general population, see Appendix A.

Data from the SAB and the SVR also were examined by offender type, as shown in Table 2. Victims were significantly more likely than perpetrators to have an institutional sex offense, mental health needs, any conviction for sexual assault against a child, and higher SAB and SVR risk levels. Perpetrators were significantly more likely than the general population to have any report/COPD for sexual misconduct, be a young first-time offender, or self-identify as transgender or homosexual. Victims were significantly more likely than the general population to have an institutional sex offense, any documentation or self-reported sexual victimization in the community, any report/COPD for sexual misconduct, and mental health needs; self-identify as transgender or homosexual; have any documented credible reports as a victim of institutional sexual assault; and have higher SAB and SVR risk levels. Some of these results are curious. For example, some of the perpetrators' scores on items such as "young first-time offender" and a nonheterosexual orientation resemble what might have been expected of victims. In addition, victims were found to score higher than the general population on both institutional sex offense and documented credible reports of being an institutional sexual assault victim, which seems contradictory. Although the SAB information is populated by the CDOC's mainframe database, SVR responses are based upon the offender's self-report, file records, and the CDOC programmer's assessment (Weber, O'Keefe, & Steers, 2009). It may be that offenders are reluctant to disclose certain sensitive information and/or records may be unavailable.

Table 2. Comparison of SAB and SVR scores by offender type

Variable	Perpetrator	Victim	General Pop
Sexually Aggressive Behavior (SAB) items			
Institutional sex offense[ac]	1.2%	5.3%	1.4%
Designation as sexually violent predator (C.R.S. 18-3-414.5)	1.5%	3.0%	1.0%
Any felony conviction of institutional sexual assault	0.0%	0.0%	0.2%
Any COPD rape conviction	0.7%	0.4%	0.2%
Total SAB risk level high (3-5)[ac]	4.0%	9.8%	2.6%
Sexual Vulnerability Risk (SVR) items			
Documentation or self-reported sexual victimization in community[c]	5.2%	7.9%	2.8%
Any report/COPD for sexual misconduct[bc]	8.4%	12.8%	4.4%
Young first-time offender[b]	18.1%	13.5%	9.0%
Self-reported fear of being sexually assaulted	2.7%	2.3%	1.6%
Mental health needs[ac]	41.6%	51.9%	34.0%
Developmental disabilities	7.7%	8.3%	7.6%
Self-identified transgender or homosexual[bc]	4.0%	3.8%	1.0%
Any conviction for sexual assault against a child[a]	8.4%	18.4%	12.6%
Any documented credible reports as victim of institutional sexual assault[c]	1.5%	2.6%	0.2%
Meets SVR31 criteria plus 4 or more SVR2 criteria	0.2%	0.8%	0.2%
Victim of 2 or more institutional sexual assaults	0.0%	0.0%	0.0%
Total SVR risk level high (3-5)[ac]	9.9%	20.5%	12.7%

[a]Indicates that that perpetrators and victims differ on that variable, $p \leq .01$; [b]indicates that perpetrators and the general population differ on that variable, $p \leq .01$; [c]indicates that victims and the general population differ on that variable, $p \leq .01$.

On the CCI, perpetrators, victims, and the general population were significantly different on several sexuality variables, as well as a number of the subscales (see Appendix B). Percentages for the sexuality questions represent the proportion of offenders answering "more true" or "strongly true." Subscales are reported as *t* scores, where the mean is 50 and the standard deviation is 10 (with the exception of the random responding and deny blatant psychopathology scales and the grouped Axis II and II, personality change, hostility, and neuropsychological syndromes). Perpetrators and victims differed significantly on antisocial and sadistic personality disorders, aggression, apathy, anger, and dangerousness and on the grouped scales, personality change due to a general medical condition and hostility. Perpetrators and the general population differed significantly on their response to CCI question 141 ("I have been sexually faithful to one person for more than 1 year") and 226 ("I like to have sex with as many women as possible") in addition to a number of subscales (deny blatant psychopathology; maladjustment; antisocial, borderline, narcissistic, paranoid, passive aggressive, sadistic, and schizotypal personality disorders; general anxiety, major depressive, and post-traumatic stress disorders; schizophrenia; psychotic thinking; neuropsychological dysfunction; memory and attention problems; executive function deficits on the frontal lobes; emotional lability [instability of emotions]; disinhibition; aggression; paranoia due to a general medical condition; anger; dangerousness; impulsivity; and attention deficit hyperactivity disorder), as well as the grouped Axis II disorder, hostility, personality change due to a general medical condition, and neuropsychological syndromes scales. Victims and the general population differed on three CCI sexuality questions ("I like to look sexy or act sexy," "I like sex with women only," and "I like sex with men or women") and a number of CCI subscales (avoidant, borderline, dependent, histrionic, narcissistic, and passive aggressive personality disorders; major depressive and post-traumatic stress disorder; executive function deficits on the frontal lobes; decision-making difficulties; poor planning; emotional lability; and apathy) as well as Axis II disorders and neuropsychological syndromes scales.

Can We Predict Offender Behavior?

Two logistic regressions were conducted using the data set described above (male offenders who received COPD convictions between July 1, 2010, and May 31, 2012) to identify variables able to predict the likelihood that an offender will be a perpetrator or victim. The first regression analyzed how well a group of variables was able to distinguish perpetrators from the general population. Only variables that demonstrated statistically significant differences between perpetrators and the general population in descriptive analyses were included: initial custody level; blue card predator and victim; mental health, academic, substance level, vocational, and anger needs; ethnicity; gang affiliation; assault and robbery convictions; age; number of class 1 or 2 COPDs; LSI-R score; three SVR items (any report/COPD for sexual misconduct, young, first-time offender, and self-identified transgender or homosexual); two CCI sexuality questions ("I have been sexually faithful to one person for more than 1 year" and "I like to have sex with as many women as possible"); and a number of CCI subscales (deny blatant psychopathology; maladjustment; antisocial, borderline, narcissistic, paranoid, passive aggressive, sadistic, and schizotypal personality disorders; general anxiety, major depressive, and post-traumatic stress disorders; schizophrenia; psychotic thinking; neuropsychological dysfunction; memory and attention problems; executive function deficits on the frontal lobes; emotional lability (instability of emotions); disinhibition;

aggression; paranoia due to a general medical condition; anger; dangerousness; impulsivity; and attention deficit hyperactivity disorder. The combination of variables *overall* was able to correctly distinguish perpetrators from the general population 78% of the time, with 596 cases included in the analysis; however, inmates in the general population were correctly classified 83% of the time, meaning that nonperpetrators were incorrectly classified as perpetrators 17% of the time.

Table 3 below shows partial results of the logistic regression for predicting predatory behavior, with only significant variables displayed. Statistically significant predictors of predatory behavior were academic needs level, gang affiliation (member and suspect), blue card predator, age, number of class 1 or 2 COPDs, initial custody level, passive aggressive personality disorder, post-traumatic stress disorder, neuropsychological dysfunction, memory and attention problems, self-identified transgender or homosexual, and robbery conviction. Positive regression coefficients mean that as the variable increases, the outcome—in this case predatory behavior—is more likely; negative coefficients mean that as the variable increases, the outcome is less likely. The significance column shows the probability that a similar result would be found if there was truly no relationship between that variable and the predatory behavior. Values less than .05 are considered significant. The odds ratio is a measure of the strength of the relationship between two variables. A ratio of 1 indicates that changes in the variable do not increase or decrease the likelihood of significance, while ratios lower than 1 indicate less chance of predatory behavior and ratios greater than 1 indicate a higher chance of predatory behavior. For example, in Table 3, an offender designated as a blue card predator is 3 times more likely to be a perpetrator than not.

Table 3. Partial logistic regression results for predicting predatory behavior

Variable	Regression coefficients	Significance	Odds ratio
Academic needs	.788	.005	2.200
Gang member	1.352	.000	3.866
Gang suspect	1.225	.000	3.403
Blue card predator	1.130	.000	3.095
Age	-.060	.000	.942
Class 1 or 2 COPDs	.109	.003	1.115
Initial custody level	.358	.006	1.430
Passive aggressive personality disorder	-.045	.040	.956
Memory and attention problems	.105	.001	1.111
Self-identified transgender or homosexual	1.774	.031	5.897
Robbery conviction	.788	.022	2.200

The second regression analyzed how well a group of variables was able to distinguish victims from the general population. Only variables that demonstrated statistically significant differences between victims and the general population in descriptive analyses were included: initial custody level; blue card predator and victim; mental health and sex offender needs; age; SAB and SVR needs; number of class 1 or 2 COPDs; gang affiliation; LSI-R score; SAB item 31 (institutional sex offense); four SVR items (documentation or self-reported sexual victimization in community, any report/COPD for sexual misconduct, self-identified transgender or homosexual, and any documented credible reports as victim

of institutional sexual assault); three CCI sexuality questions ("I like to look sexy or act sexy," "I like sex with women only," and "I like sex with men or women"); and a number of CCI subscales (avoidant, borderline, dependent, histrionic, narcissistic, and passive aggressive personality disorders; major depressive and post-traumatic stress disorder; executive function deficits on the frontal lobes; decision-making difficulties; poor planning; emotional lability; and apathy). The regression model distinguished victims from the general population *overall* 75% of the time, with 613 cases included in the analysis; inmates in the general population were correctly classified 88% of the time, meaning that nonvictims were incorrectly classified as victims 12% of the time.

Table 4 shows partial results of the logistic regression for predicting victimization, with only significant variables displayed. For victims, significant predictors were gang membership, blue card predator, age, mental health needs, initial custody level, the CCI apathy subscale, passive aggressive personality disorder, and CCI question 4 ("I like to look sexy or act sexy"). The significance column shows the probability that a similar result would be found if there was truly no relationship between that variable and victimization. Values less than .05 are considered significant. The odds ratio is a measure of the strength of the relationship between two variables. A ratio of 1 indicates that changes in the variable do not increase or decrease the likelihood of significance, while ratios lower than 1 indicate less chance of victimization and ratios greater than 1 indicate a higher chance of victimization. For example, in Table 4, an offender designated as a gang member is 2.5 times more likely to be a victim than not.

Table 4. Partial logistic regression results for predicting victimization

Variable	Regression coefficients	Significance	Odds ratio
Gang member	.915	.006	2.497
Blue card predator	.535	.049	1.708
Age	-.034	.002	.967
Mental health needs	.730	.001	2.075
Initial custody level	.334	.006	1.397
Apathy subscale (CCI)	-.043	.008	.958
CCI question 4 ("I like to look sexy or act sexy.")	.638	.009	1.892

Exploratory Analyses

To further investigate whether particular variables could predict perpetrator or victim status, an exploratory data mining technique called classification and regression trees (CART) was used. This technique develops a decision tree, with cut points for continuous variables, to predict status. This differs from logistic regression techniques because it allows for interactions between variables and determines the cut points needed to predict membership. Interactions are indicated by different variables used in different paths in the flow chart. Variables may also appear multiple times within a decision tree, with different cutoffs used at different decision points. Separate models were developed to predict victim and perpetrator status. The same variables were used in each model and are shown in Table 5.

Table 5. Variables used in CART analysis

Demographics	Risk/Needs	CCI Assessment[a]
Age	Incarceration number	CCI sexual behavior questions
Age (grouped)	Initial custody level	CCI Axis I subscales
Height	LSI-R score and group	CCI Axis II subscales
Height (grouped)	BC predator	CCI neuropsychological subscales
Weight	BC victim	CCI Axis I total
Weight (grouped)	Days incarcerated before incident	CCI Axis II total
Ethnicity	Offense degree	CCI neuropsychological syndromes
	Violent crime (yes/no)	CCI personality change
	Previous crime (yes/no)[b]	CCI hostility
	COPD classes (yes/no)[c]	
	Number of Class I and II COPDs	
	Number of Class III COPDs	
	Academic needs	
	Anger needs	
	Mental health needs	
	Mental retardation/dev. disability needs	
	Medical needs	
	Self-destructiveness needs	
	Sex offender needs	
	Vocational needs	
	Substance abuse needs	
	Lifetime sex offender status	
	Gang affiliation	
*SAB and SVR variables listed in Table 2 also were included.		

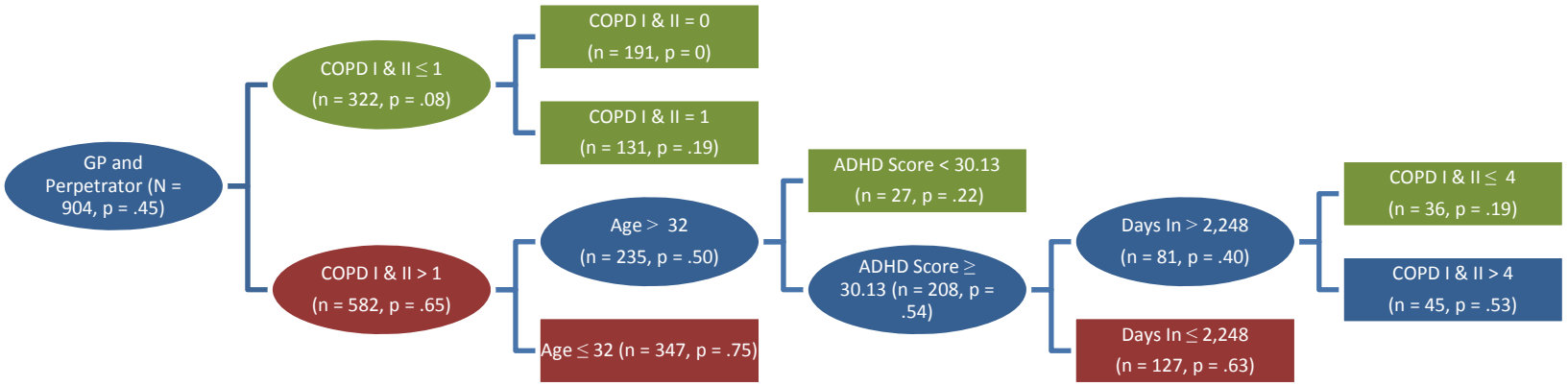
[a]CCI variables are major groupings and contain multiple scores.
[b]Coded crimes are murder, homicide, kidnapping, sexual assault, wrongs to children, assault, robbery, extortion, arson, weapons, and menacing.
[c]Coded COPD classes are murder, manslaughter, kidnapping, assault, riot, rape, arson, robbery, contraband, drugs, and other.

Although CART is a statistical technique, it does not assess statistical significance. These models are sample dependent and caution should be used when trying to generalize across samples. However, these methods do provide some guidance on which variables might be useful for predicting an outcome. Although many variables were used initially, only a small number appear in the final models, likely due to correlations between predictor variables and weak relationships between variables and victim or perpetrator status.

Predicting Perpetrator Status

To predict perpetrator status, 904 inmates were analyzed: 500 general population inmates with no known incident and 404 inmates with a known incident in which they were classified as the perpetrator. Inmates classified as both perpetrator and victim were removed from the analysis. Figure 1 displays the flow chart showing paths that predict perpetrator status. The summary statistic of interest in each group is the proportion of inmates who were known perpetrators. One should look for very high or very low proportions. Within the entire sample, the proportion of perpetrators is 0.45, so groups with proportions much different from this value would strongly predict predatory behavior. An arbitrary cutoff was selected; groups that were beyond ±0.15 were considered to be different from the full sample value (i.e., ≥ .60 indicates high likelihood of being a perpetrator and ≤ 0.30 indicates low likelihood of being a perpetrator). Four variables distinguished between perpetrators and the general population inmates: number of class I and II COPDs, age, attention deficit hyperactivity disorder (ADHD) score, and number of days incarcerated before the incident. COPDs were used multiple times in the flow diagram. Groups that were predicted to have a larger likelihood of being a perpetrator were 1) younger inmates with more than one class 1 and II COPD; 2) inmates with more than one Class I and II COPD who were older and had higher ADHD scores and smaller number of days incarcerated. Groups that were predicted to have a small likelihood of being a perpetrator were 1) inmates with a low number of COPDs; 2) older inmates with a higher number of COPDs who had low ADHD scores; and 3) older inmates who had been in prison for a long period (2,248 days or more) and had fewer than four COPDs

Figure 1. Model Predicting Perpetrator Status

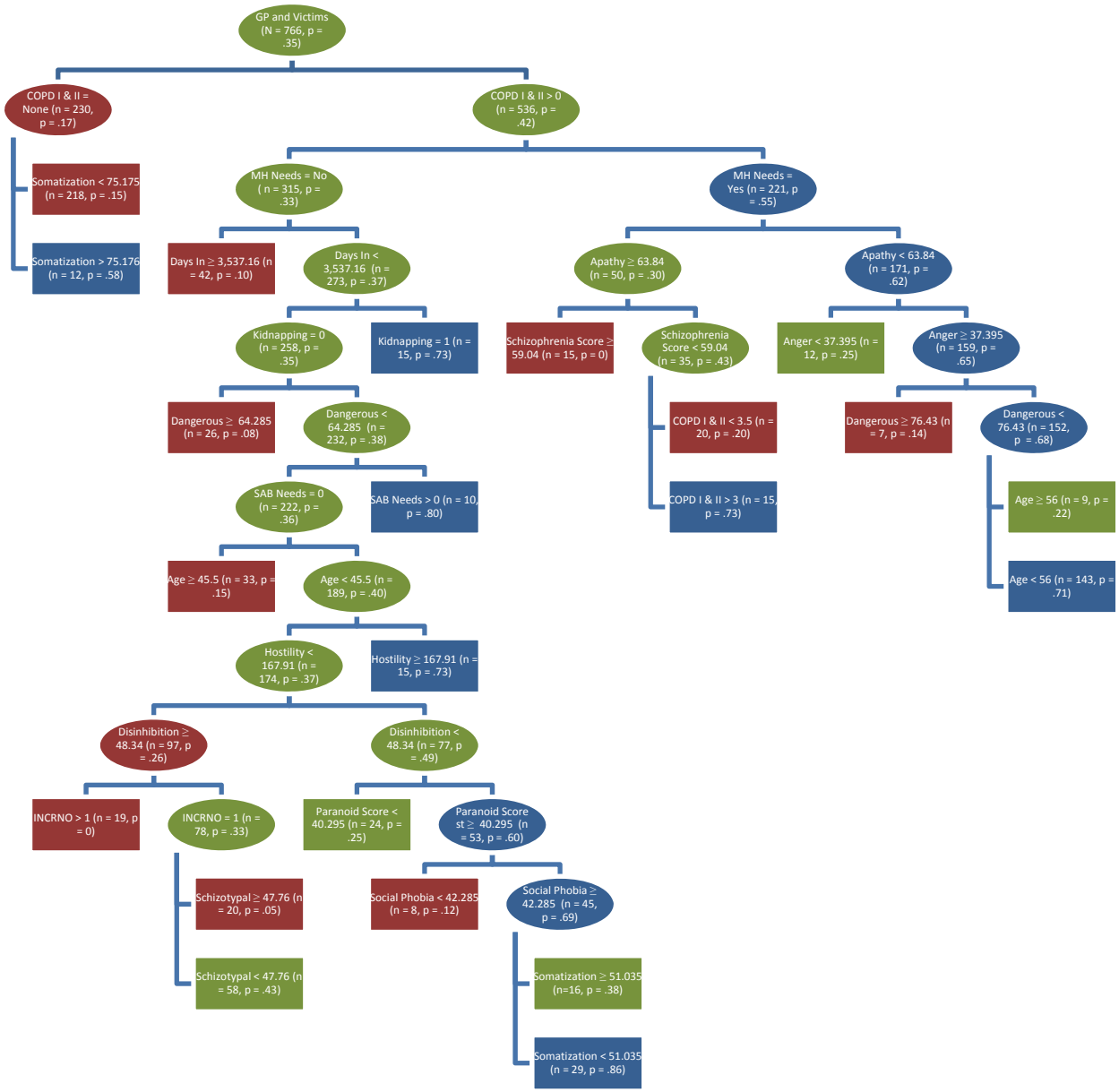


Note. Circles indicate decision points. Rectangles indicate end point of decision tree. Red coloring indicates strong prediction of perpetrators; green indicates strong prediction of general population (or nonperpetrators), and blue indicates group that is similar to the full sample. An arbitrary difference of ±.15 from the full sample value (0.45) was used to make decisions about strong predictors of perpetrators (≥ .60) or strong predictors of nonperpetrators ($p \leq .30$).
n is the number of inmates in that box.
p is the proportion of known perpetrators in that group.

Predicting Victim Status

To predict victim status, 766 inmates were analyzed: 500 general population inmates with no known incident and 266 inmates with a known incident in which they were classified as the victim. Inmates classified as both perpetrator and victim were removed from the analysis. Figure 2 displays the flow chart showing paths that predict victim status. The summary statistic of interest in each group is the proportion of inmates who were known victims. One should look for very high or very low proportions. Within the entire sample, the proportion of victims is 0.35, so groups with proportions much different from this value would strongly predict victimization. An arbitrary cutoff was selected; groups that were beyond ±0.15 were considered to be different from the full sample value (i.e., ≥ .50 indicates high likelihood of being a victim; and ≤ 0.20 indicates low likelihood of being a victim). Predicting victim status was much more complicated than predicting perpetrator status. Seventeen variables could distinguish between victims and the general population inmates: number of class I and II COPDs, age, number of days incarcerated before the incident, mental health needs, having committed a kidnapping crime, incarceration number, SAB needs, and a variety of psychological variables as measured by the CCI, including apathy, disinhibition, schizophrenia, somatization, paranoid, schizotypal, social phobia, hostility, dangerousness, and anger. There were 10 final groups that had a much lower likelihood of victimization compared to the full sample, seven final groups that had a higher likelihood of victimization, and five final groups that were similar to the general population on likelihood of being a victim. These are illustrated in Figure 6.

Figure 2. Model Predicting Victim Status



Note. Circles indicate decision points. Rectangles indicate end point of decision tree. Purple indicates strong prediction of victim, orange indicates strong prediction of general population (or nonvictims), and blue indicates group that is similar to the full sample. An arbitrary difference of ±.15 from the full sample value (0.35) was used to make decisions about strong predictors of victims (≥ .50) or strong predictors of nonvictims (≤ .20).

n is the number of inmates in that group.

p is the proportion of known victims in the group.

Days In: Number of days incarcerated before the incident.

INCRNO: Incarceration number; **Kidnapping:** Past crime.

Disinhibition, apathy, somatization, schizophrenia, anger, dangerous, hostility, paranoid, schizotypal, and social phobia are CCI subscales.

Limitations and Recommendations

A limitation of this research was potentially questionable data on sensitive variables believed to be relevant to internal classification, such as sexual orientation and prior sexual victimization collected for the SVR. Data on the CCI also were unavailable for long-term offenders who were incarcerated before 2004, when the CCI was routinely administered to new admissions. As a result, identifying the victim sample for this study was extremely difficult, with data that were spotty at best. Fairly reliable systems are in place for identifying predators, but until we can more accurately predict who their victims will be, internal classification will be based more on guesswork than data.

In addition, collecting accurate and thorough incident data presented a challenge. For this study, it was necessary to read incident reports and record data manually because the COPD tables and RI tables are not linked. This issue should be addressed in the future because it greatly impedes the Department's ability to track patterns and predict behavior. RI data was sometimes inaccurate (e.g., incorrect CDOC numbers) and key facts such as whether or not the offenders were cellmates was unclear in most cases.

Following are recommended next steps:

- Improve the collection of incident data in the RI system, particularly the identification of victims.
- Link the COPD and RI systems.
- Draft a new internal classification instrument incorporating the variables identified as significant in the current study and/or consider adopting items from instruments used in other states.
- Implement the instrument (train staff, work with OIT to automate), monitor its effectiveness (including tracking the use of overrides), and modify as data become available.

References

Adwell, S. T. (1991). A case for single-cell occupancy in America's prisons. *Federal Probation, 55,* 64-67.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Association of State Correctional Administrators & Corrections Program Office, Office of Justice Programs. (1998). *State and federal corrections information systems: An inventory of data elements and an assessment of reporting capabilities.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics. Retrieved from http://bjs.ojp.usdoj.gov/content/pub/pdf/sfcis.pdf

Austin, J., Fabelo, T., Gunter, A., & McGinnis, K. (2006). *Sexual violence in the Texas prison system.* Washington, DC: The JFA Institute. Retrieved from https://www.ncjrs.gov/pdffiles1/nij/grants/215774.pdf

Barak-Glantz, I. L. (1982). A decade of disciplinary, administrative, and protective control of inmates in the Washington state penitentiary: A research note. *Journal of Criminal Justice, 10,* 481-492.

Barr, B. L., Gilbert, C. R., & O'Keefe, M. L. (2012). *Statistical report: Fiscal year 2011.* Colorado Springs: Colorado Department of Corrections.

Beck, A. J., & Harrison, P. M. (2010). *Sexual victimization in prisons and jails reported by inmates, 2008-09* (NCJ 231169). Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Beck, A. J., & Johnson, C. (2012). *Sexual victimization reported by former state prisoners, 2008* (NCJ 237363). Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Bench, L. L., & Allen, T. D. (2003). Investigating the stigma of prison classification: An experimental design. *Prison Journal, 83,* 367-382. doi:10.1177/0032885503260143

Cao, L., Zhao, J., & Van Dine, S. (1997). Prison disciplinary tickets: A test of the deprivation and importation models. *Journal of Criminal Justice, 25,* 103-113. doi:10.1016/S0047-2352(96)00054-2

Camp, S. D., & Gaes, G. G. (2005). Criminogenic effects of the prison environment on inmate behavior: Some experimental evidence. *Journal of Crime and Delinquency, 51,* 425-442. doi:10.1177/0011128704271471

Chonco, N. R. (1989). Sexual assaults among male inmates: A descriptive study. *The Prison Journal, 69,* 72-82.doi:10.1177/003288558906900110

Clements, C. B. (1981). The future of offender classification: Some cautions and prospects. *Criminal Justice and Behavior, 8,* 15-38. doi:10.1177/009385488100800102

Clements, C. B. (1996). Offender classification: Two decades of progress. *Criminal Justice and Behavior, 23,* 121-143. doi:10.1177/0093854896023001009

Coolidge, F. L. (n.d.). *Coolidge Axis II Inventory-Revised (CATI+): Manual.*

Coolidge, F. L. (2004). *Coolidge Correctional Inventory.* Colorado Springs, CO: Author.

Coolidge, F. L., Segal, D. L., Klebe, K. J., Cahill, B. S., & Whitcomb, J. M. (2009). Psychometric properties of the Coolidge Correctional Inventory in a sample of 3,962 prison inmates. *Behavioral Sciences and the Law, 27,* 713-726. doi:10.1002/bsl.896

Cunningham, M. D., & Sorensen, J. (2006). Actuarial models for assessing prison violence risk: Revisions and extensions of the risk assessment scale for prison (RASP). *Assessment, 13,* 253-265. doi:10.1177/1073191106287791

Cunningham, M. D., & Sorensen, J. (2007). Predictive factors for violent misconduct in close custody. *Prison Journal, 87,* 241-253. doi:10.1177/0032885507303752

Cunningham, M. D., Sorensen, J. R., & Reidy, T. J. (2005). An actuarial model for assessment of prison violence risk among maximum security inmates. *Assessment, 12,* 40-49. doi:10.1177/1073191104272815

Fischer, D. R. (2002). *Arizona Department of Corrections: Security threat group (STG) program evaluation, final report* (Grant No. 99-CE-VX-0004; Doc No. 197045). Rockville, MD: National Criminal Justice Reference Service (NCJRS). Retrieved from http://www.ncjrs.gov/pdffiles1/nij/grants/197045.pdf

Gaes, G. G., & Goldberg, A. L. (2004). *Prison rape: A critical review of the literature.* Washington, DC: U.S. Department of Justice, National Institute of Justice.

Gaes, G. G., & McGuire, W. J. (1985). Prison violence: The contribution of crowding versus other determinants of prison assault rates. *Journal of Research in Crime and Delinquency, 22,* 41-65. doi:10.1177/0022427885022001003

Gendreau, P., Goggin, C. E., & Law, M. A. (1997). Predicting prison misconducts. *Criminal Justice and Behavior, 24,* 414-431. doi:10.1177/0093854897024004002

Gesch, C. B., Hammond, S. M., Hampson, S. E., Eves, A., & Crowder, M. J. (2002). Influence of supplementary vitamins, minerals, and essential fatty acids on the antisocial behaviour of young adult prisoners: Randomized, placebo-controlled trial. *British Journal of Psychiatry, 181,* 22-28. doi:10.1192/bjp.181.1.22

Grinnell, R. (2012). *Fundamental attribution error.* Retrieved from http://psychcentral.com/encyclopedia/2009/fundamental-attribution-error/

Hardyman, P. L. (2012). *Revalidation and update of the internal classification system for Wyoming Department of Corrections: Final report.* Middletown, CT: Criminal Justice Institute.

Hardyman, P. L. (2005). *Wyoming Department of Corrections male internal classification handbook.* Middletown, CT: Criminal Justice Institute.

Hardyman, P. L., Austin, J., Alexander, J., Johnson, K. D., & Tulloch, O. C. (2002). *Internal classification systems: Case studies in their development and implementation*. Washington, DC: U.S. Department of Justice, National Institute of Corrections.

Harer, M. D., & Langan, N. P. (2001). Gender differences in predictors of prison violence: Assessing the predictive validity of a risk classification system. *Crime & Delinquency, 47,* 513-536. doi:10.1177/0011128701047004002

Hensley, C., Tewksbury, R., & Castle, T. (2003). Characteristics of prison sexual assault targets in male Oklahoma correctional facilities. *Journal of Interpersonal Violence, 18,* 595-606. doi:10.1177/0886260503251132

Huebner, B. (2003). Administrative determinants of inmate violence: A multilevel analysis. *Journal of Criminal Justice, 31,*107-117. doi: 10.1016/S0047-2352(02)00218-0

Jenness, V., Maxson, C. L., Matsuda, K. N., & Sumner, J. M. (2007). *Violence in California correctional facilities: An empirical examination of sexual assault.* Irvine, CA: University of California-Irvine, Center for Evidence-Based Corrections. Retrieved from http://ucicorrections.seweb.uci.edu/sites/ucicorrections.seweb.uci.edu/files/Jenness%20et%20al._PREA%20Report.pdf

Kansas Department of Corrections. (2010). *Project concept document (DRAFT) and internal classification checklist for male inmates.* Topeka, KS: Author.

Kerbs, J. J., & Jolley, J. J. (2007). Inmate-on-inmate victimization among older male prisoners. *Crime & Delinquency, 53,* 187-218. doi:10.1177/0011128706294119

Kupers, T. (2005, August). *Hearing: At risk: Sexual abuse and vulnerable groups behind bars.* Testimony before the National Prison Rape Elimination Commission, Washington, DC. Retrieved from http://cybercemetery.unt.edu/archive/nprec/20090820160627/http://nprec.us/docs/sf_atrisk1_tkupersstatement.pdf

Lerner, K., Arling, G., & Baird, S. C. (1986). Client management classification strategies for case supervision. *Crime & Delinquency, 32,* 254-271. doi:10.1177/0011128786032003002

Levinson, R. B. (1982). Guest editorial: A clarification of classification. *Criminal Justice and Behavior, 9,* 133-141. doi:10.1177/0093854882009002002

Levinson, R. B. (1988). Developments in the classification process: Quay's AIMS approach. *Criminal Justice and Behavior, 15,* 24-38. doi:10.1177/0093854888015001004

Lockwood, D. (1980). *Prison sexual violence.* New York: Elsevier.

McCorkle, R. C., Miethe, T. D., & Drass, K. A. (1995). The roots of prison violence: A test of the deprivation, management, and "not-so-total" institution models. *Crime and Delinquency, 41,* 317-331. doi:10.1177/0011128795041003003

Megargee, E. I. (1994). Using the Megargee MMPI-based classification system with MMPI-2s of male prison inmates. *Psychological Assessment, 6,* 337-344.

Mieir, G., & Oldfield, D. (2007). *A statistical review of AICS performance for the division of adult institutions.* Jefferson City, MO: Missouri Department of Corrections.

Missouri Department of Corrections. (2008). *Adult Internal Classification System (AICS).* Jefferson City, MO: Author.

Montgomery, A. (2011). *Inmate assaults at maximum security MADOC facilities.* Norfolk, MA: Massachusetts Department of Correction.

Patrick, S. (1998). Differences in inmate-inmate and staff-inmate altercations: Examples from a medium security prison. *Social Science Journal, 35,* 253-263. doi:10.1016/S0362-3319(98)90044-1

Quay, H. C. (1984). *Managing adult inmates: Classification for housing and program assignments.* College Park, MD: American Correctional Association.

Sorensen, J., & Cunningham, M. D. (2010). Conviction offense and prison violence: A comparative study of murderers and other offenders. *Crime & Delinquency, 56,* 103-124. doi:10.1177/0011128707307175

Steiner, B., & Wooldredge, J. (2008). Inmate versus environmental effects on prison rule violations. *Criminal Justice and Behavior, 35*, 438-456. doi: 10.1177/0093854807312787

Steinke, P. (1991). Using situational factors to predict types of prison violence. *Journal of Offender Rehabilitation, 17,* 119-132.

Stop Prisoner Rape. (2006). *In the shadows: Sexual violence in U.S. detention facilities. A shadow report to the U.N. Committee Against Torture.* Los Angeles, CA: Author.

Struckman-Johnson, C., & Struckman-Johnson, D. (2000). Sexual coercion rates in seven Midwestern prison facilities for men. *The Prison Journal, 80,* 379-390. doi: 10.1177/0032885500080004004

Struckman-Johnson, C., & Struckman-Johnson, D. (2006). A comparison of sexual coercion experiences of men and women in prison. *Journal of Interpersonal Violence, 21,* 1591-1615. doi:10.1177/0886260506294240

Toch, H. (1977). *Living in prison: The ecology of survival.* New York: The Free Press.

Van Voorhis, P. (1988). A cross classification of five offender typologies: Issues of construct and predictive validity. *Criminal Justice and Behavior, 15,* 109-124. doi:10.1177/0093854888015001009

Van Voorhis, P. (1994). *Psychological classification of the adult male prison inmate.* Albany, NY: State University of New York Press.

Vaughn, M. S. (1996). Prison civil liability for inmate-against-inmate assault and breakdown/disorganization theory. *Journal of Criminal Justice, 24,* 139-152.

Vaughn, M. S., & del Carmen, R. V. (1993). Research note: Smoking in prisons—A national survey of correctional administrators in the United States. *Crime & Delinquency, 39,* 225-239. doi:10.1177/0011128793039002007

Weber, K. R., O'Keefe, M. L., & Steers, My. (2009). *Evaluation of the Colorado Department of Corrections' Prison Rape Elimination Program.* Colorado Springs, CO: Department of Corrections.

Wolff, N., & Shi, J. (2009a). Contextualization of physical and sexual assault in male prisons: Incidents and their aftermath. *Journal of Correctional Health Care, 15,* 58-77. doi:10.1177/1078345808326622

Wolff, N., & Shi, J. (2009b). Type, source, and patterns of physical victimization: A comparison of male and female inmates. *The Prison Journal, 89,* 172-191. doi: 10.1177/0032885509334754

Wolff, N., Shi, J., & Blitz, C. L. (2008). Racial and ethnic disparities in types and sources of victimization inside prison. *The Prison Journal, 88,* 451-472. doi: 10.1177/0032885508325392

Wolff, N., Shi, J., Blitz, C. L., & Siegel, J. (2007). Understanding sexual victimization inside prisons: Factors that predict risk. *Criminology & Public Policy, 6,* 535-564.

Wright, K. N. (1994*). Effective prison leadership.* Binghamton, NY: William Neil.

Zager, L. D. (1988). The MMPI-Based Criminal Classification System: A review, current status, and future directions. *Criminal Justice and Behavior, 15,* 39-57. doi:10.1177/0093854888015001005

Appendix A

Table 6. Demographics, needs, criminal risk, and criminal history by offender type

Variable	Variable Subcategory	Known Perpetrator (*n* = 404)	Known Victim (*n* = 268)	General Pop. (*n* = 499)
First incarceration		71.0%	68.8%	69.8%
Gang status[abc]	None	37.6%	60.5%	71.8%
	Member	29.0%	18.8%	11.0%
	Associate	6.7%	4.1%	5.4%
	Suspect	26.7%	16.5%	11.8%
Lifetime sex offender		6.4%	10.2%	7.6%
Prior COPDs				
Murder		0.0%	0.0%	0.0%
Manslaughter		0.0%	0.0%	0.0%
Kidnapping		0.0%	0.0%	0.0%
Assault		1.0%	0.4%	0.0%
Riot		0.0%	0.4%	0.0%
Rape		0.0%	0.0%	0.0%
Arson		0.0%	0.0%	0.0%
Robbery		0.0%	0.0%	0.0%
Contraband		0.0%	0.0%	0.0%
Drugs		0.5%	0.0%	0.0%
Crime				
Homicide		15.1%	11.3%	13.6%
Kidnapping		6.9%	7.1%	4.8%
Sexual Assault[a]		13.4%	21.4%	17.0%
Wrongs to Children		4.5%	7.5%	6.8%
Assault[b]		32.9%	26.3%	21.8%
Robbery[b]		19.6%	14.3%	10.0%
Extortion		0.5%	0.4%	0.8%
Arson		1.0%	1.9%	0.4%
Weapons[a]		8.4%	3.4%	6.6%
Menacing		18.6%	13.9%	14.0%
Violent crime conviction (yes)		59.2%	56.4%	52.8%
Ethnicity[ab]	Caucasian	35.9%	48.9%	45.0%
	African American	19.8%	16.2%	19.0%
	Hispanic	41.3%	31.2%	32.0%
	Other	3.0%	3.8%	4.0%
Offense degree	1	5.7%	4.5%	3.8%
	2	8.4%	6.8%	10.8%
	3	34.2%	27.8%	29.0%
	4	35.9%	40.2%	37.2%
	5	13.1%	17.7%	14.4%
	6	2.2%	2.3%	4.2%

[a]Indicates that that perpetrators and victims differ on that variable, $p \leq .01$; [b]indicates that perpetrators and the general population differ on that variable, $p \leq .01$; [c]indicates that victims and the general population differ on that variable, $p \leq .01$.

Variable	Variable Subcategory	Known Perpetrator (*n* = 404)	Known Victim (*n* = 268)	General Pop. (*n* = 499)
Academic needs (yes)[b]		26.7%	20.8%	19.6%
Anger management needs (yes)[ab]		58.2%	46.3%	42.5%
Mental health needs (yes)[abc]		40.1%	52.6%	28.6%
Mental ret./dev. disability needs (yes)		6.4%	7.1%	6.6%
Medical needs (yes)[a]		16.1%	24.8%	17.4%
Sex offender needs (yes)[ac]		24.3%	35.0%	26.0%
Substance level needs (yes)[ab]		83.0%	72.3%	74.6%
Self-destructiveness needs (yes)		11.5%	12.8%	11.4%
Vocational needs (yes)[ab]		66.6%	56.6%	53.2%
Height grps (66" or <)		14.9%	16.6%	17.6%
Weight grps (140 lbs or <)		6.4%	8.3%	8.0%
Blue card predator[abc]		42.3%	27.4%	17.6%
Blue card victim[bc]		16.3%	21.1%	9.4%
Age groups[bc]	23 and <	16.3%	11.3%	8.2%
	24-64	83.2%	88.3%	88.2%
	65 and >	0.5%	0.4%	3.6%
Age[abc]	Mean	31.93	34.79	38.48
	St. Dev.	9.71	9.96	12.56
Initial custody level[bc]	Minimum	10.2%	5.7%	11.5%
	Minimum-R	21.1%	26.4%	27.4%
	Medium	41.9%	40.4%	44.4%
	Close	26.8%	27.5%	16.7%
Days incarcerated before incident	Mean	1,280.17	1,152.22	1,465.26
	St. Dev.	1,619.64	1,478.34	2,002.52
#Class 1 or 2 COPDs[bc]	Mean	6.21	5.31	2.76
	St. Dev.	5.87	7.41	6.26
LSI-R score[bc]	Mean	33.50	32.96	30.97
	St. Dev.	7.24	7.21	7.95

[a]Indicates that that perpetrators and victims differ on that variable, $p \leq .01$; [b]indicates that perpetrators and the general population differ on that variable, $p \leq .01$; [c]indicates that victims and the general population differ on that variable, $p \leq .01$.

Appendix B

Table 7. CCI scores by offender type

Variable		Known Perpetrator	Known Victim	General Pop.
Q 4: "I like to look sexy or act sexy."[c]		26.1%	35.8%	20.4%
Q 67: "I am uptight when people find me sexually attractive."		19.1%	17.9%	20.1%
Q 93: "I have little or no desire to have sex with another person."		21.4%	22.9%	16.2%
Q 97: "I have never forced anyone to have sex with me."		88.0%	90.4%	88.3%
Q 141: "I have been sexually faithful to one person for more than 1 year."[b]		71.6%	78.4%	83.6%
Q 151: "I question the faithfulness of my spouse or sexual partner."		32.6%	32.6%	29.4%
Q 153: "In a close relationship (wife/husband, older son or daughter), I like that person to have a lot of freedom from me."		67.2%	63.3%	67.4%
Q 226: "I like to have sex with as many women as possible."[b]		30.5%	26.1%	21.6%
Q 245: "I like sex with men only."		2.3%	6.4%	2.7%
Q 246: "I like sex with women only."[c]		93.5%	87.6%	95.0%
Q 247: "I like sex with men or women."[c]		4.4%	9.2%	3.7%
Q 248: "I like to dress in women's clothing."		2.3%	3.2%	1.2%
Q 249: "I wish I could have a sex change."		2.6%	3.2%	1.0%
Q 250: "I like sex with animals, men, or women."		2.6%	1.4%	1.0%
Deny blatant psychopathology[b]	Mean	184.89	178.76	171.57
	St. Dev.	43.61	40.51	39.29
Random responding	Mean	3.40	3.39	3.33
	St. Dev.	1.04	1.31	1.00
Maladjustment[b]	Mean	52.76	50.83	48.64
	St. Dev.	12.64	11.41	11.57
Antisocial personality disorder[ab]	Mean	57.19	53.56	52.03
	St. Dev.	11.83	10.51	10.97
Avoidant personality disorder[c]	Mean	48.34	50.15	47.94
	St. Dev.	9.97	9.67	9.39
Borderline personality disorder[bc]	Mean	47.51	47.03	44.10
	St. Dev.	10.72	10.07	9.59
Dependent personality disorder[c]	Mean	45.62	47.29	44.27
	St. Dev.	10.63	10.79	9.58
Depressive personality disorder	Mean	46.10	47.29	45.06
	St. Dev.	13.11	13.31	11.82
Histrionic personality disorder[c]	Mean	40.26	41.20	38.49
	St. Dev.	10.40	11.46	10.27
Narcissistic personality disorder[bc]	Mean	41.92	41.88	39.32
	St. Dev.	10.57	10.80	10.20

[a]Indicates that that perpetrators and victims differ on that variable, $p \leq .01$; [b]indicates that perpetrators and the general population differ on that variable, $p \leq .01$; [c]indicates that victims and the general population differ on that variable, $p \leq .01$

Variable		Known Perpetrator	Known Victim	General Pop.
Obsessive-compulsive personality disorder	Mean	49.50	49.26	49.00
	St. Dev.	8.79	8.73	8.00
Paranoid personality disorder[b]	Mean	53.79	51.47	50.09
	St. Dev.	11.57	11.81	11.87
Passive aggressive personality disorder[bc]	Mean	46.56	45.64	42.94
	St. Dev.	12.26	12.01	11.34
Sadistic personality disorder[ab]	Mean	53.00	48.83	47.84
	St. Dev.	13.39	10.66	11.15
Schizoid personality disorder	Mean	57.55	56.96	56.45
	St. Dev.	9.63	9.57	9.76
Schizotypal personality disorder[b]	Mean	49.42	48.74	46.94
	St. Dev.	10.98	10.70	10.40
Self-defeating personality disorder	Mean	54.32	53.99	52.62
	St. Dev.	10.33	9.95	9.20
General anxiety disorder[b]	Mean	53.35	53.33	51.89
	St. Dev.	8.23	8.05	7.19
Major depressive disorder[bc]	Mean	50.69	50.94	48.53
	St. Dev.	11.38	10.49	9.86
Post-traumatic stress disorder[bc]	Mean	56.24	55.58	52.89
	St. Dev.	13.17	13.07	12.53
Schizophrenia[b]	Mean	50.80	49.77	47.74
	St. Dev.	13.71	12.43	11.95
Psychotic thinking[b]	Mean	56.57	56.42	53.79
	St. Dev.	14.96	14.00	13.13
Social phobia	Mean	51.63	52.61	51.51
	St. Dev.	9.39	9.21	9.25
Withdrawal	Mean	53.51	52.92	52.69
	St. Dev.	9.55	9.41	9.64
Neuropsychological dysfunction[b]	Mean	50.17	49.62	47.69
	St. Dev.	12.28	12.27	10.97
Memory and attention[b]	Mean	49.24	47.97	46.63
	St. Dev.	11.63	11.43	10.46
Language dysfunction	Mean	50.43	50.54	48.99
	St. Dev.	10.88	10.91	9.67
Neurosomatic complaints	Mean	56.30	57.03	54.42
	St. Dev.	14.00	14.89	12.95
Executive function deficits on frontal lobes[bc]	Mean	47.84	48.59	45.78
	St. Dev.	10.11	10.15	9.96
Decision-making difficulties[c]	Mean	49.19	49.73	47.47
	St. Dev.	10.66	10.42	10.30
Poor planning[c]	Mean	46.77	47.51	45.80
	St. Dev.	8.53	7.94	7.80
Failure to complete tasks	Mean	45.94	46.28	44.46
	St. Dev.	10.63	11.60	10.60
Emotional lability (instability of emotions)[bc]	Mean	50.89	51.05	48.57
	St. Dev.	9.88	9.54	9.13

[a]Indicates that that perpetrators and victims differ on that variable, $p \leq .01$; [b]indicates that perpetrators and the general population differ on that variable, $p \leq .01$; [c]indicates that victims and the general population differ on that variable, $p \leq .01$

Variable		Known Perpetrator	Known Victim	General Pop.
Disinhibition[b]	Mean	54.19	52.24	51.66
	St. Dev.	9.95	10.35	9.42
Aggression[ab]	Mean	49.35	46.75	44.68
	St. Dev.	11.28	10.45	10.03
Apathy[ac]	Mean	60.94	58.43	61.62
	St. Dev.	8.27	9.32	7.98
Paranoia (due to a general medical condition)[b]	Mean	56.14	54.85	53.37
	St. Dev.	11.53	10.85	11.54
Anger[ab]	Mean	48.56	45.65	43.80
	St. Dev.	11.26	10.01	10.39
Dangerousness[ab]	Mean	57.08	53.19	52.25
	St. Dev.	11.47	9.69	10.82
Impulsivity[b]	Mean	53.18	51.31	50.76
	St. Dev.	9.55	9.93	9.04
Introversion-extroversion	Mean	46.90	46.82	47.34
	St. Dev.	9.53	9.28	9.33
Attention deficit hyperactivity disorder[b]	Mean	44.85	43.55	41.65
	St. Dev.	13.18	14.31	12.59
Axis I	Mean	416.59	414.00	401.09
	St. Dev.	84.31	75.85	72.87
Axis II[bc]	Mean	691.09	683.29	657.09
	St. Dev.	121.61	115.00	110.72
Personality Change Due to General Medical Condition[ab]	Mean	271.52	263.32	259.89
	St. Dev.	30.81	28.66	30.49
Hostility[ab]	Mean	158.82	150.15	146.82
	St. Dev.	28.68	25.49	26.98
Neuropsychological Syndromes[bc]	Mean	395.87	397.28	381.25
	St. Dev.	69.56	69.47	65.42

[a]Indicates that that perpetrators and victims differ on that variable, $p \leq .01$; [b]indicates that perpetrators and the general population differ on that variable, $p \leq .01$; [c]indicates that victims and the general population differ on that variable, $p \leq .01$

Internal Classification Assessment Pilot Study

Introduction

The Colorado Department of Corrections (CDOC) recently reevaluated and revalidated its external classification system that governs the security and custody level of offender placements. An important complement to that system is the development of a structured internal classification system to determine housing, programming, and work assignments within facilities, which has been absent within CDOC.

Following a thorough literature review that included a review of internal classification methods used in other states, CDOC's Office of Planning and Analysis analyzed retrospective assault data to identify variables that may be able to predict tendencies toward aggression and vulnerability. An Internal Classification Committee subsequently was created to draft a new administrative regulation and assessment instrument.

The proposed aggression assessment consists of five categories of data currently available in the Department of Corrections Information System (DCIS): most serious current felony conviction, current age, institutional behavior, aggression interactions, and institutional aggression (see appendix). Scores from each category would be totaled to assign one of three aggression levels: (1) low predatory tendency (scores ranging from 0-8), (2) moderate predatory tendency (9-11), and (3) high predatory tendency (12+). The Sexual Vulnerability Risk (SVR) code in DCIS would determine one of three vulnerability levels: (1) nonvictim (SVR code 1), (2) potential victim (SVR code 2), and (3) known victim (SVR codes 3-5; see appendix).

Purpose

The goal of this study was to explore the reliability and validity of the proposed internal classification instrument for assessing predatory tendencies and the likelihood of victimization among male inmates, although any conclusions based on the limited scope of this investigation are tentative.

Method

Male inmates continuously incarcerated in CDOC facilities between June 30, 2010, and January 31, 2013, were identified as the sample (N = 7,616; i.e., offenders who left CDOC and returned during that time period were excluded). A database was created with fields for all the categories on the aggression assessment (most serious current felony conviction, current age, institutional behavior, aggression interactions, and institutional aggression) in addition to the SVR code. Scores were calculated in each category and summed to determine aggression and vulnerability levels for offenders in fiscal year (FY) 2010 and compare them to those same offenders' scores in FY 2013. The purpose was to ascertain the reliability and validity of the aggression and vulnerability scores.

Results

Aggression scale

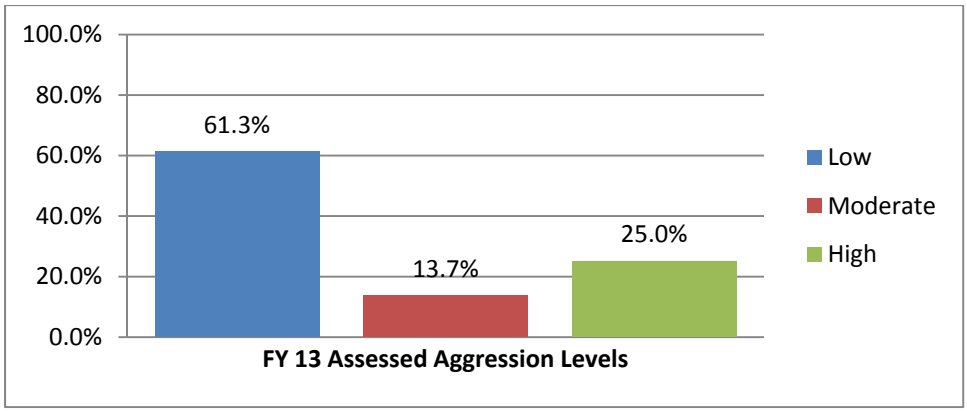
Based on a chi-squared analysis, Table 1 compares the percentage of offenders who scored as low (1), moderate (2), and high (3) on the aggression scale in FY 2010 to how those same offenders scored in FY 2013. Results suggest high reliability. For example, 77% of offenders who scored as having high predatory tendencies in FY 2010 also did so in FY 2013.

Table 1. Comparison of FY10 and FY13 aggression levels (N = 7,616)

FY 10 Aggress.	FY 13 Aggression Level			
Level	**Low**	**Moderate**	**High**	**Total *n***
Low	82.8%	8.8%	8.4%	4,357
Moderate	23.5%	46.6%	29.9%	1,093
High	7.8%	15.1%	77.1%	2,166

The proposed instrument also was tested on a full sample of 15,990 inmates incarcerated on January 31, 2013. Figure 1 shows the distribution of offenders into low, moderate, and high aggression categories.

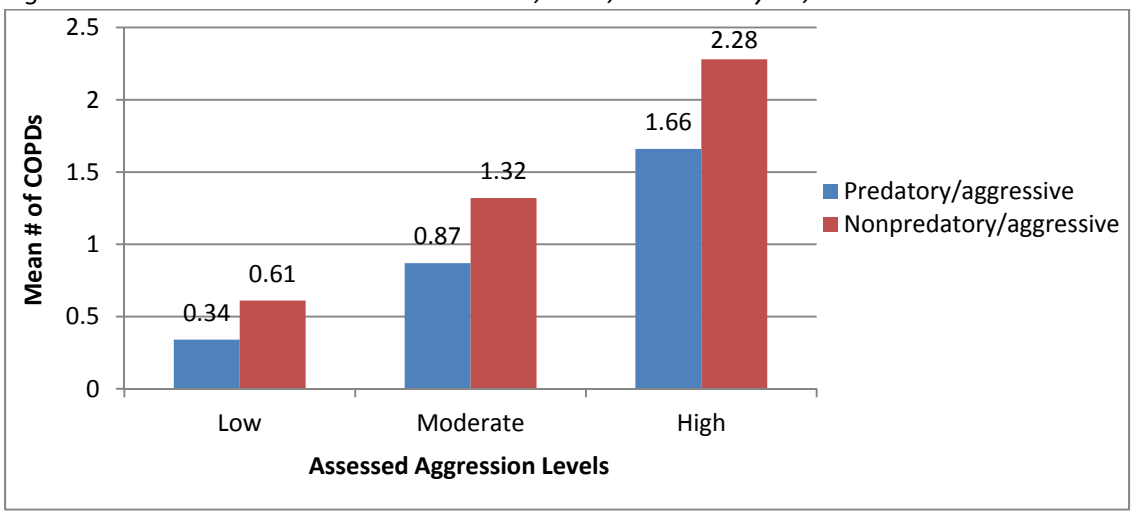
Figure 1. FY13 Assessed Aggression Levels (N = 15,990)



An intraclass correlation coefficient (ICC), which is used to describe how strongly units in the same group are related to each other, also was computed for the FY 2010 and FY 2013 assessed aggression levels to examine change over time. The ICC was .834, which was statistically significant and indicated very strong agreement between the two assessments.

The number of Code of Penal Discipline (COPD) violations was compared for the FY 2010 and FY 2013 samples. Figure 2 shows the average number of predatory/aggressive and nonpredatory/aggressive COPDs offenders committed between June 30, 2010, and January 31, 2013, by their assessed FY 2010 aggression level. As aggression levels increased, so did the number of COPDs in both categories.

Figure 2. COPDs committed between June 30, 2010, and January 31, 2013



The internal consistency of the aggression scale also was examined for the FY 2013 full sample. Internal consistency, measured by a statistic called Cronbach's alpha coefficient, indicates whether the items on a scale all measure the same construct. Cronbach's alpha values range between 0 and 1, with values above 0.7 considered good. This value may be inaccurate, however, for scales with items less than 10; in such cases, the mean interitem correlation value is generally reported, rather than Cronbach's alpha. The mean interitem correlation for the proposed CDOC aggression assessment (which only has five items) was .119, suggesting a poor relationship among the items. (Table 2 shows the same result in an interitem correlation matrix.) Item-total correlations, which indicate how well each item is related to the total score, showed that only institutional behavior (COPDs) and institutional aggression scores (both > 0.3) appeared to be measuring the same construct as the total scale.

Table 2. Interitem correlation matrix for aggression scale (N = 15,990)

	Most serious felony conviction	Current age	Institutional behavior	Aggression interactions	Institutional aggression	Item-Total Correlation
Most serious felony conviction	1.000	-.082	.025	.274	.093	.087
Current age	*	1.000	.116	.032	.094	.112
Institutional behavior	*	*	1.000	.155	.314	.322
Aggression interactions	*	*	*	1.000	.168	.234
Institutional aggression	*	*	*	*	1.000	.345

Vulnerability scale

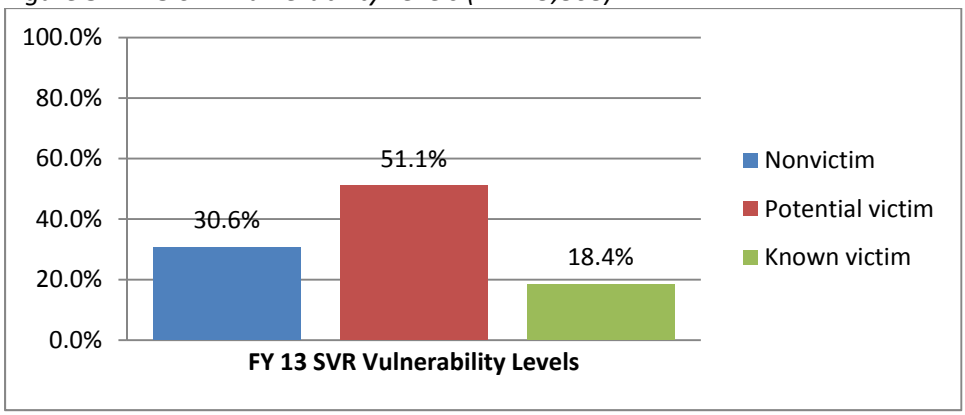
Table 3 compares the percentage of offenders who scored as low (1), moderate (2), and high (3) on the vulnerability scale in FY 2010 to how those same offenders scored in FY 2013. Results indicate high reliability. For example, nearly all of the offenders (98%) who scored as known victims in FY 2010 also did so in FY 2013. However, the SVR alone may be limited in its ability to assess vulnerability.

Table 3. Comparison of FY10 and FY13 vulnerability levels (N = 7,616)

FY 10 Vuln.	FY 13 Vulnerability Level			
Level	**Nonvictim**	**Potential**	**Known**	**Total *n***
Nonvictim	57.6%	38.7%	3.8%	3,161
Potential victim	11.4%	84.0%	4.5%	2,930
Known victim	0.4%	1.4%	98.2%	1,525

The proposed instrument also was tested on a full sample of 15,990 inmates incarcerated on January 31, 2013. SVR data were missing for 122 offenders, leaving a total of 15,868. Figure 3 shows the distribution of offenders into nonvictims, potential victims, and known victims.

Figure 3. FY13 SVR Vulnerability Levels (N = 15,868)



To further investigate vulnerability, a researcher read the narrative of reportable incidents (RIs) associated with COPDs for the June 30, 2010, to January 31, 2013, time period. The purpose was to determine how many offenders in a random sample of 100 known victims identified by the SVR code in FY 2010 were later subject to further victimization. Only one offender from the FY 2010 sample was clearly victimized during that time frame. Interestingly, using the same process with a random sample of 100 high predators from the FY 2010 sample, a researcher found that six offenders became victims. These results are consistent with the larger internal classification study of retrospective assault data.

The internal consistency of the SVR also was examined for the FY 2013 full sample. The mean interitem correlation for the SVR was -.009, suggesting significant problems with the instrument. (Table 4 shows the same result in an interitem correlation matrix.) Item-total correlations, which demonstrate how well each item is related to the total score, also showed negative values, which suggests in this case that items are not measuring the same underlying construct. There should be no negative correlations in a properly designed and scored scale.

Table 4. Interitem correlation matrix for SVR (N = 15,868)

	SVR11	SVR21	SVR23	SVR24	SVR25	SVR26	SVR27	SVR28	Item-Total Correlation
SVR11	1.000	-.195	-.154	-.118	-.294	-.098	-.105	-.109	-.394
SVR21	*	1.000	.012	.118	.089	.020	.118	.023	-.019
SVR23	*	*	1.000	.016	.009	-.001	-.011	-.033	-.110
SVR24	*	*	*	1.000	.083	.044	.087	.026	.051
SVR25	*	*	*	*	1.000	.119	.074	-.014	-.138
SVR26	*	*	*	*	*	1.000	.019	.001	.030
SVR27	*	*	*	*	*	*	1.000	.022	.033
SVR28	*	*	*	*	*	*	*	1.000	-.083

SVR11 = no reported victimization; SVR21 = sexual victimization in community; SVR22 = report/COPD for sexual misconduct; SVR23 = young, first-time offender; SVR24 = fear of being sexually assaulted; SVR25 = mental health need; SVR26 = developmental disability; SVR27 = self-identified transgender or homosexual; SVR28 = conviction for sexual assault against child; SVR31 = victim of institutional sexual assault; SVR51 = meets SVR31 criteria plus 4 or more SVR2 criteria; SVR52 = victim of 2 or more institutional sexual assaults; SVR22, 31, 51, and 52 were removed from the analysis due to zero variance.

Conclusion and Limitations/Recommendations

Given the limited scope of this analysis, results should be interpreted with caution. Results suggest that the proposed internal classification instrument may hold promise for identifying predatory tendencies. However, the low item-total correlations may indicate that the only meaningful measures of aggression on this scale are institutional behavior and institutional aggression, thus making is difficult to identify predators until they demonstrate violent behavior. The validity of the SVR as a vulnerability assessment is questionable, and assessors must evaluate whether that measure alone is sufficient to gauge vulnerability (in the absence of a current alternative) or is only one of many factors that must be considered.

As indicated previously, improving the collection of incident data in the RI system—particularly the identification of victims—and linking the COPD and RI systems are paramount. The draft assessment also must be tested with new offenders entering CDOC, monitored for effectiveness, and modified as necessary.

Appendix

Colorado Department of Corrections

Internal Classification Assessment

Offender Name: DOC#: Date of Assessment: 4/12/2013

Custody: Close
Current Aggression Category:High
Current Vulnerability Category: Known Victim

Assessment Type: Intake
Notes:

Aggression Assessment			
1. Most Serious Felony Conviction			4. Aggression Interactions	
Highest or High	☐ 3		Anger Code 5	☐ 3
Moderate	☐ 2		Anger Code 4	☐ 2
Low Moderate or Low	☐ 1		Anger Code 3	☐ 1
2. Current Age			5. Institutional Aggression	
27 or younger	☐ 3		SAB 3 or higher	☐ 6
28 – 47	☐ 1		STG Member	☐ 5
48 or older	☐ 0		STG Suspect	☐ 3
			STG Associate	☐ 2
3. Institutional Behavior			STG Inactive	☐ 1
3+ Pred/Aggrs (5 years)	☐ 8		None	☐ 0
1+Pred/Aggrs (1 year)	☐ 8			
2 Pred/Aggrs (13-60 months)	☐ 5		Notes about these factors:	
1 Pred/Aggrs (13-60 months)	☐ 3			
2+ Non Pred/Aggrs (1 year)	☐ 1			
None	☐ 0			

Total Aggression Score: **SVR Code:**

Assessment Scales:

Aggression

0 - 8	**Low Predatory Tendency (1)**
9 - 11	**Moderate Predatory Tendency (2)**
12 +	**High Predatory Tendency (3)**

Vulnerability

1	**Non Victim (1)**
2	**Potential Victim (2)**
3 - 5	**Known Victim (3)**

Sexual Vulnerability Risk (SVR) Items

SVR11	No reported sexual victimization or risk indicators
SVR21	Documentation or self-reported sexual victimization in community
SVR22	Any report/COPD for sexual misconduct
SVR23	Young first-time offender
SVR24	Self-reported fear of being sexually assaulted
SVR25	Mental health needs
SVR26	Developmental disabilities
SVR27	Self-identified transgender or homosexual
SVR28	Any conviction for sexual assault against a child
SVR31	Any documented credible reports as victim of institutional sexual assault
SVR51	Meets SVR31 criteria plus 4 or more SVR2 criteria
SVR52	Victim of 2 or more institutional sexual assaults