

Reducing Violence in Correctional Institutions: Revalidation of the Inmate Risk Assessment for Violent, Nonsexual Victimization

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Jail and prison administrators are responsible for ensuring institutional safety and order. Recent estimates indicate violence in correctional institutions is pervasive. One promising approach to reduce institutional violence is using a risk assessment to predict the likelihood of victimization. Once corrections officials identify high victimization risk offenders, these authorities can take steps to triage interventions to mitigate such risks. This strategy, however, requires a classification instrument that is available and predictively valid. In 2014, Labrecque, Smith, and Wooldredge created one such tool—the Inmate Risk Assessment for Violent, Nonsexual Victimization (RVNSV). This study reassesses the predictive validity of the RVNSV on a sample of adult inmates in the United States. The results indicate the RVNSV is a valid predictor of inmate victimization, among males and females.

Keywords: inmate victimization; prison violence; risk assessment; opportunity theory

Jail and prison administrators are responsible for ensuring institutional safety and order, which is assessed in part by levels of facility violence (DiIulio, 1987; Useem & Reisig, 1999). Although many believe that violent victimization in correctional institutions is widely underreported (e.g., Mair, Frattaroli, & Teret, 2003; McCorkle, 1992), the available estimates indicate this problem is pervasive nonetheless. For example, in a survey of 7,785 inmates from 14 prisons in a mid-Atlantic state, Wolff, Blitz, Shi, Siegel, and Bachman (2007) report that 25% of male and 20% of female respondents are physically assaulted by another inmate during one's sentence. In a survey of 5,640 inmates from 46 prisons in Ohio and Kentucky, Wooldredge and Steiner (2013) indicate 7% of respondents are physically assaulted by another inmate in the previous 6 months, with a range of 1%–17% between prisons. Perhaps, the most informative estimates come from the 2011–2012 National Inmate Survey (NIS)—a nationally representative survey of 91,177 inmates housed in 233 state and federal prisons and 358 local jails—conducted by the Bureau of Justice Statistics (see Beck, Berzofsky, Caspar, & Krebs, 2013). From this

dataset, Beck (2015) found 13% of prison respondents and 17% of jail respondents were involved in a physical altercation with another inmate (or staff member) in the previous year.

These estimates are not inconsequential, especially when one considers the ethical and practical consequences of institutional violence. In the year 2014 alone, inmate-on-inmate violence resulted in 83 deaths in state prisons (Noonan, 2016b) and another 25 in local jails (Noonan, 2016a). A growing body of research also suggests violence in correctional institutions is responsible for several other undesirable outcomes for victims, such as producing psychological damage and increasing antisocial behavior (i.e., institutional misconduct, postrelease recidivism; Boxer, Middlemass, & Delorenzo, 2009; Listwan, Colvin, Hanley, & Flannery, 2010; Steiner & Wooldredge, 2009; Zweig, Yahner, Visher, & Lattimore, 2015). Likewise, social scientists are increasing their efforts to identify the correlates of inmate victimization (see Steiner, Ellison, Butler, & Cain, 2017). An understanding of the distinguishable characteristics of victims (e.g., offender demographics, criminal history, mental health) and their situations (e.g., institutional routines and activities) is essential for developing informed preventative strategies (Wooldredge & Steiner, 2013).

One promising approach to reduce institutional violence is using a risk assessment to predict the likelihood of victimization (McCafferty & Scherer, 2017). Once corrections officials identify offenders who are at a high risk for victimization, these authorities can take steps to mitigate such risks (e.g., increase supervision and oversight, structure time and activities, educate how to reduce one's risk for victimization). This strategy, however, requires that an inmate victimization risk instrument is both readily available and predictively valid. Recently, Labrecque, Smith, and Wooldredge (2014) created and validated one such tool—the Inmate Risk Assessment for Violent, Nonsexual Victimization (RVNSV)—on a sample of inmates from the federal Canadian prison system. This study assesses the predictive validity of the RVNSV on a sample of inmates in the United States. This study also contributes to the general scholarship on theories of inmate victimization.

GENERAL OPPORTUNITY THEORIES OF VICTIMIZATION

The general opportunity framework provides the theoretical basis in this study. Prior penological research has applied several aspects of general opportunity theories to explain sources of victimization in prison, including lifestyles/routines, guardianship, target vulnerability, and target antagonism (e.g., Edgar & O'Donnell, 1998; Steiner et al., 2017; Wooldredge, 1994; Wooldredge & Steiner, 2013). Cohen and Felson (1979) observe that victimization potential is explained by one's daily routine activities. According to Cohen and Felson, a predatory crime is likely to occur upon the convergence in time and space of a motivated offender, a suitable target, and the absence of a capable guardian.

By its very nature, prison forces inmates to reside in close proximity with one another, thereby increasing the opportunities for violence and victimization to occur. Inmates, however, vary in their daily routines, which correspond to differences in levels of guardianship and risk for victimization (Edgar & O'Donnell, 1998). For example, research finds that inmates who participate in structured work activities and treatment services are at a lower probability for violent victimization (Wooldredge, 1998). One of the explanations for this finding is that such inmates have more oversight by correctional staff (i.e., increased guardianship) during the times of these activities.

Cohen and Felson (1979) also recognize that some individuals are inherently more susceptible to victimization based on their allure to motivated offenders. That is, some people are more vulnerable for victimization because they possess attributes that convey the message that they are less capable of preventing an attack. For example, inmates with mental illnesses or addictions to illicit substances may be at a heightened risk for victimization (Wooldredge & Steiner, 2014). Furthermore, there are several social (e.g., education, employment, marital status) and demographic (e.g., age, race) characteristics that may relate to one's target vulnerability (see Steiner et al., 2017).

Some individuals may further possess attributes that are antagonistic to others, thereby increasing their chances of being targeted for victimization. For example, inmates who perpetrate violence may be at a greater risk for retaliation (Edgar & O'Donnell, 1998). Male inmates may be more likely than female inmates to be violently victimized because men are more likely to engage in aggressive behavior that would provoke retaliatory violence (Wooldredge & Steiner, 2014). Finally, sex offenders may also be more susceptible for victimization because of the nature of their offense (Irwin, 1980).

EFFECTS OF VICTIMIZATION

The study of violent victimization is important not only because it increases physical and emotional distress (Listwan et al., 2010; Toch, 1977; Wooldredge, 1999) but also because it elevates one's propensity toward antisocial behavior (Boxer et al., 2009). Victimization is thought to enhance disrespect toward legal authority because one may view the experience as a failure of the correctional system to protect him or her from harm (Wooldredge & Steiner, 2013), and this cynicism may make it more difficult to appropriately adapt to the experience of incarceration (Meade & Steiner, 2013). Within the institution, the experience of victimization has been shown to increase rates of disciplinary infractions, calls for services, and requests for housing transfers (Ireland, 2001; Steiner & Wooldredge, 2009). What is more, victimization makes the goal of rehabilitation more difficult because it is hard to focus on treatment objectives when one is worried about being attacked (Wooldredge, 1998). Studies also show that correctional officers working in institutions with greater levels of violence display greater levels of stress (Steiner & Wooldredge, 2015).

The harmful effects of violence and victimization do not appear limited to the confines of the correctional facility. Rather, research indicates that the impact of this experience may extend far beyond the walls of the institution and into the community. Research finds that inmates who are victimized in custody often have a more difficult time reintegrating into society (Pérez, Gover, Tennyson, & Santos, 2010), which can lead to an increase in postrelease recidivism (Seiter & Kadela, 2003). In a multisite evaluation, Zweig and colleagues (2015) find that inmates who were physically assaulted or threatened in prison were more likely to use illicit substances and engage in violent criminal behavior postrelease. Even for offenders with high levels of family support in the community, the experience of victimization has been shown to still increase one's propensity toward crime (Taylor, 2015). What is perhaps most concerning is that there is no evidence to indicate that violence in correctional institutions is decreasing. It is therefore incumbent upon correctional administrators and policymakers to prioritize efforts that seek to reduce the occurrence of such brutality. Effective strategies, however, must start with knowledge about what factors increase one's risk for victimization (see Labrecque, Smith, & Wooldredge, 2014).

CORRELATES OF VICTIMIZATION

A considerable amount of correctional research focuses on predicting the perpetrators of institutional misconduct (Gendreau, Goggin, & Law, 1997), whereas researchers devote much less attention to the sources of inmate victimization. Scholars also criticize the victimization literature for largely ignoring the study of female inmates (Teasdale, Daigle, Hawk, & Daquin, 2016). Although most of the inmate victimization literature is descriptive in nature (i.e., prevalence of victimization in prison, characteristics of victims, profiles of individuals most likely to be victimized), Steiner and colleagues' (2017) systematic review of the evidence identifies 16 studies published between 1980 and 2014 that include multivariate analyses (six of which include female inmates). This synthesis of the literature reveals there are several predictor variables of both violent and property victimization, which include inmate background characteristics (e.g., offender demographics, history of victimization), institutional routines and behaviors (e.g., history of misconduct), and prison characteristics (e.g., population size).

This summary of the research confirms the conventional wisdom that not all inmates share the same victimization risk. It is less clear, however, how correctional administrators and policymakers should make use of these results to best inform policy and practice decisions. One strategy is to simply increase the supervision of all inmates who possess the characteristics identified in this literature (i.e., the young, those who suffer from a mental illness, those who have a criminal history that includes violence); however, this does not appear to be a realistic option given the wide net it casts for the at-risk population. To illustrate, a 2015 Bureau of Justice Statistics report reveals that approximately 10% of all inmates are 24 years old or younger, more than 30% have a documented mental health disorder, and about 50% are sentenced for a violent offense (Carson, 2015). Although overlap clearly exists between these groups, it is unlikely that many correctional departments possess the resources or manpower necessary to implement a systematic change in a group size of this magnitude. An alternative approach is to use an actuarial classification tool to identify individual risk for victimization and triage the preventive strategies toward those who are at an elevated risk (Labrecque, Smith, & Wooldredge, 2014; McCafferty & Scherer, 2017).

OFFENDER RISK ASSESSMENTS

The use of risk assessment in the management of criminal offenders is described as the cornerstone of evidence-based practices in corrections (Lowenkamp, Latessa, & Holsinger, 2006). Risk assessments are important because they provide justice officials with systematic and objective information that can help guide supervision and treatment decisions (Labrecque, Smith, Lovins, & Latessa, 2014). There is overwhelming support for risk instruments in predicting various criminal outcomes (see Gendreau, Little, & Goggin, 1996), including general offenses (Bonta & Andrews, 2017), violent behavior (Harris, Rice, Quinsey, & Cormier, 2015), sexual recidivism (Tully, Chou, & Browne, 2013), institutional misconduct (Chenane, Brennan, Steiner, & Ellison, 2015), and prison violence (Cunningham, Sorensen, & Reidy, 2005; Cunningham, Sorensen, Vigen, & Woods, 2011). Research finds these tools are also quite resilient and predict well across different demographics of offenders, including age (Schwalbe, 2007), gender (Lowenkamp, Holsinger, & Cohen, 2015), and race/ethnicity (Wormith, Hogg, & Guzzo, 2015). Despite the fact that research in this area focuses on offending-related outcomes (e.g., recidivism, institutional

misconduct), there is good reason to believe that prediction instruments can serve other purposes, such as predicting one's probability for victimization.

Recently, Labrecque and colleagues created and validated the RVNSV to predict violent, nonsexual victimization among 12,024 adult male inmates in the federal Canadian prison system. Using a 25% random sample of these inmates, Labrecque, Smith, and Wooldredge (2014) examined the zero-order correlations between 345 assessment variables and a measure of violent, nonsexual victimization. All of the variables that had a statistically significant relationship ($p < .01$) were placed in a multivariate logistic regression model predicting the victimization measure. Nonsignificant variables in the multivariate model were eliminated one at a time, until only significant variables remained ($p < .01$). The final model included six static and dynamic items (see Appendix in Labrecque, Smith, & Wooldredge, 2014, for a full copy of the instrument). The RVNSV was then validated on the three remaining 25% random samples of inmates in the study and support was found for the tool being a valid predictor of inmate victimization. This classification tool represents a critical first step in assisting correctional authorities to better identify inmates who are at the greatest victimization risk while in custody.

More recently, in a study of 1,918 inmates in 12 state prison systems, McCafferty and Scherer (2017) found that the Level of Service Inventory-Revised: Screening Version (LSI-R: SV)—a tool designed to predict general offending behavior—is also capable of predicting inmate victimization (defined in their study as physical violence and threats). Although encouraging, the use of risk instruments to predict victimization in correctional populations appear limited to these two works. Furthermore, we are not aware of any correctional agency that has implemented the use of a victimization risk instrument in an institutional setting. Likewise, there is urgency for more academic investigations in this area, as well as a need to assess whether these risk assessments are predictively valid for inmates of both genders.

CURRENT STUDY

This study adds to this gap in knowledge by assessing the ability of the RVNSV to predict institutional victimization in a sample of male and female inmates from the United States. This study also contributes to the general scholarship on inmate victimization. The authors discuss the policy and practical implications of this work and make a plea to correctional administrators to implement a victimization risk assessment, such as the RVNSV into practice.

METHOD

Participants

This validation study uses data from the Serious and Violent Offender Reentry Initiative (SVORI) multisite evaluation of prisoner reentry programs across 12 states (see Lattimore et al., 2012). Between July of 2004 and May of 2007, SVORI evaluators interviewed a sample of 2,054 adult inmates—including 1,697 males and 357 females—who were incarcerated for serious and/or violent offenses (e.g., robbery, sexual crime, burglary, assault) approximately 1 month prior to the respondents' release date. During these interviews, evaluators collected information on the inmate's sociodemographic characteristics, criminal history, lifestyle behaviors, and victimization experiences in custody. The use of the SVORI dataset

in the current investigation is advantageous for several reasons, including the quality and type of data collected by the researchers of the initial study. Most important, however, the SVORI dataset is one of the few available that contains sufficient information to construct the RVNSV and also includes data on inmate victimization to assess the validity of the tool.

Measures

Institutional Victimization. *Institutional victimization* is defined here as the experience of a physical assault (e.g., being hit, grabbed, kicked, pushed) or the threat of such violence during one's current incarceration. Any respondent who reported one or more of these victimizations is coded as a victim (0 = *no*; 1 = *yes*). This dependent variable does not include sexual victimizations because this type of information was not available in the SVORI dataset (C. Visher, personal communication, July 19, 2016), which is similar to the outcome used by Labrecque, Smith, and Wooldredge (2014).

Inmate Risk Assessment for Violent, Nonsexual Victimization. The RVNSV consists of six items that are situated within the elements of target vulnerability and target antagonism: (a) meets three or more of the sex offense criteria, (b) ever an instigator of institutional misconduct, (c) ever placed in segregation for punishment, (d) uses drugs when stressed, (e) poor regard for others, and (f) past mental health diagnosis. Because of differences between the original RVNSV and SVORI datasets, it is not possible to identically replicate the operationalization of the six items used by Labrecque, Smith, and Wooldredge (2014). The measures in this study; however, are close approximations of the original items (see Appendix for a comparison of the items used).

Meets three or more of the sex offense criteria is measured as a current conviction for an attempted or completed sexual offense (i.e., antagonistic characteristic). *Ever an instigator of institutional misconduct* is operationalized as receiving a disciplinary infraction during the current incarceration (i.e., antagonistic characteristic). *Ever placed in segregation for punishment* includes spending any time in administrative segregation during the current commitment as a result of a disciplinary infraction (i.e., antagonistic characteristic). *Uses drugs when stressed* is represented by a composite measure of drug use, which includes use of any one of 13 substances at least weekly (i.e., vulnerability characteristic). *Poor regard for others* is contrived with scores from the Symptom Assessment-45 Questionnaire hostility scale, with those scoring above the mean coded as having a poor regard for others (i.e., antagonistic characteristic). *Past mental health diagnosis* is scored if the respondent has ever received professional care for a mental health disorder (i.e., vulnerability characteristic).

This study uses the RVNSV weighting scale developed by Labrecque and colleagues. More specifically, Labrecque, Smith, and Wooldredge (2014) assigned weights using the value of the unstandardized coefficient (*b*) for each item in a multivariate logistic regression model predicting violent, nonsexual victimization in their construction sample. The total RVNSV risk score is the sum of these six weighted items, which range from 0 to 55.2. Inmates are then binned into one of three risk levels using the same cutoff criteria that Labrecque, Smith, and Wooldredge (2014) found produced the maximal amount of predictive accuracy in their study: low risk (<15.00), moderate risk (15.01–25.00), and high risk (>25.01).

Control Variables

This study includes six control variables that fall within the general opportunity theories of victimization (see Wooldredge & Steiner, 2014). Four are demographic characteristics: gender (0 = *female*, 1 = *male*), race (0 = *White*, 1 = *non-White*), marital status

(0 = *not married*, 1 = *married*), and education (0 = *no high school diploma or GED*, 1 = *high school diploma or GED*). The other two variables relate to one's criminal record. Criminal history includes the number of prior arrests and time served is the number of years incarcerated at the time of the prerelease interview. It is important to note that with the exception of age—which is not available in the SVORI dataset—these are the same control variables included by Labrecque, Smith, and Wooldredge (2014).

Sample Characteristics

Table 1 presents the descriptive statistics for the RVNSV risk score, risk levels, and control variables by sample type. Approximately 42% of the total sample are White. Roughly 10% are married, and 60% have a high school diploma or equivalency. The mean number of prior arrests for the sample is 14, and the average time served is 2.4 years. The average total RVNSV risk score for the full sample is 17.7, with females scoring slightly lower than males (16.7 and 17.9, respectively). According to the RVNSV cutoff criteria, 53% of the sample are low risk for victimization, 9% are moderate risk, and 38% are high risk. About 53% of the sample report an institutional victimization during their current commitment. Males have a higher victimization rate than females (55% and 41%, respectively).

Analysis

This revalidation study uses bivariate and multivariate analyses to assess the predictive validity of the RVNSV. The authors conduct point-biserial correlations and receiver operating characteristic (ROC) curve analyses to examine the effect of the RVNSV risk score on institutional victimization. For both of these analyses, we also report the 95% confidence intervals (CIs) of the estimates. The authors use chi-square analyses and multivariate

TABLE 1. Sample Characteristics and Descriptive Statistics, by Sample Type

Characteristic	Full Sample	Male Sample	Female Sample
	% (n)	% (n)	% (n)
Racial minority	58.1 (1,192)	60.3 (1,022)	47.6 (170)
Married	10.3 (212)	9.6 (162)	14.0 (50)
High school diploma/GED	60.0 (1,231)	59.5 (1,009)	62.2 (222)
No. of prior arrests ^a	14.0 (12.3)	14.0 (12.3)	14.0 (12.3)
Time served ^a	2.4 (2.5)	2.5 (2.6)	1.7 (2.1)
RVNSV risk score ^a	17.7 (12.9)	17.9 (12.7)	16.7 (13.5)
RVNSV low risk	52.6 (1,080)	51.4 (872)	58.3 (208)
RVNSV moderate risk	9.1 (187)	9.3 (157)	8.4 (30)
RVNSV high risk	38.3 (787)	39.4 (668)	33.3 (119)
Institutional victimization	52.5 (1,078)	54.9 (931)	41.2 (147)

Note. GED = general educational development; RVNSV = Inmate Risk Assessment for Violent, Nonsexual Victimization.

^aReported values include mean and standard deviation.

logistic regression analyses to estimate the relationship between the RVNSV risk levels and institutional victimization. We report the adjusted odds ratios (AOR) and 95% CIs for the risk levels and control variables in the multivariate analyses. To examine the generalizability of the RVNSV instrument across different populations of offenders, the authors conduct these analyses on the full sample and then on the gender-specific subsamples separately.

RESULTS

Figure 1 illustrates the victimization rates by risk level and sample type, as well as bivariate analyses for each group. For the full sample, the victimization rates increase in the hypothesized direction with the risk levels. Specifically, 38% of the low-risk inmates report a victimization, followed by 55% of the moderate-risk and 72% of the high-risk. A chi-square analysis indicates that there is a statistically significant relationship between risk level and victimization ($p < .001$). Results from the gender-specific analyses indicate a similar pattern. For males, 41% of the low-risk inmates report a victimization, followed by 56% of the moderate-risk and 72% of the high-risk. For females, 25% of low-risk inmates report a victimization, followed by 47% of the moderate-risk, and 68% of the high-risk. Chi-square analyses indicate that both of these gendered relationships are statistically significant at the .001 level.

Table 2 presents the results from the ROC and point-biserial correlation analyses that examine the relationships between the total RVNSV risk score and victimization. All of the effect sizes are statistically significant ($p \leq .001$). For context, these results are compared to minimum standards set forth by Rice and Harris (2005) for small (area under the curve [AUC] = .556; r_{pb} = .100), medium (AUC = .639; r_{pb} = .243), and large (AUC = .714; r_{pb} = .371) effect sizes. Based on the results from the full sample, there is a significant and medium relationship between the RVNSV score and victimization (AUC = .69; r_{pb} = .34).

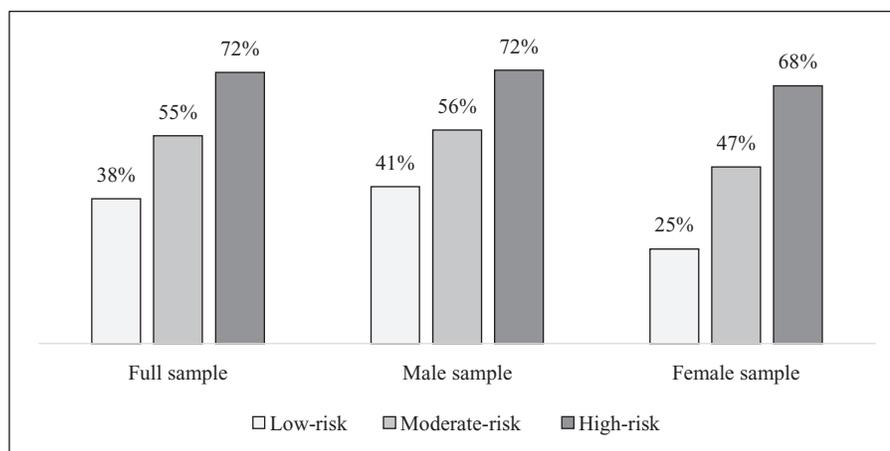


Figure 1. Institutional victimization rates by Inmate Risk Assessment for Violent, Nonsexual Victimization risk level.

TABLE 2. Correlations and Area Under the Curve (AUC) for Inmate Risk Assessment for Violent, Nonsexual Victimization and Institutional Victimization

Sample	AUC [95% CI]	r_{pb} [95% CI]
Full sample	.69 [.67, .72]	.34 [.30, .38]
Male sample	.68 [.66, .71]	.32 [.28, .36]
Female sample	.75 [.70, .80]	.43 [.34, .51]

Note. r_{pb} = point-biserial correlation coefficient; CI = confidence interval.

The results also indicate a significant relationship between the risk score and victimization for both genders. For the sample of male inmates, the effect sizes indicate there is a significant and medium relationship ($AUC = .68$; $r_{pb} = .32$). The effect sizes for the female sample, however, is large and strong ($AUC = .75$; $r_{pb} = .43$).

Table 3 presents the results from the multivariate binary regression models for the full samples as well as for both the male and female samples separately. For the full sample, the results indicate RVNSV risk level significantly and positively relates to victimization. Based on these results, moderate-risk inmates are approximately twice as likely to be a victim as low-risk inmates ($AOR = 1.86$; 95% CI [1.33, 2.58]), whereas high-risk inmates are approximately three times more likely than the low-risk inmates ($AOR = 2.94$; 95% CI [2.36, 3.67]). A similar pattern for the risk levels is observed for both the male and female models, although the AORs differ slightly in magnitude between groups. For the male sample, the moderate-risk male inmates are nearly twice as likely to be a victim as the low-risk inmates ($AOR = 1.72$; 95% CI [1.19, 2.47]), whereas the high-risk inmates are about two-and-a-half times more likely than low-risk male inmates ($AOR = 2.59$; 95% CI [2.03, 3.29]). For the female sample, the moderate-risk inmates are more than two-and-a-half times as likely to be a victim as low-risk inmates ($AOR = 2.68$; 95% CI [1.20, 5.96]); however, high-risk females are 5 times more likely to than the low-risk inmates ($AOR = 5.24$; 95% CI [3.06, 8.98]).

There are several other noteworthy findings in the multivariate analyses. First, these results indicate that length of time spent in prison is a significant and positive predictor in all three models. This is contrary to Labrecque, Smith and Wooldredge (2014) results that find limited support for this measure (significant in only one of four models). Finally, an inmate's race is significant in the full and male samples, but not in the female sample.

DISCUSSION

This study uses data from the SVORI evaluation to revalidate the RVNSV on a sample of 2,054 inmates from 12 state prison systems in the United States. Although the focus of the study is on the predictive validity of the RVS NV, the individual risk measures included in the tool are grounded in the general opportunity theories of victimization. Several significant findings result from this work. This study confirms that higher RVNSV scores correlate with a greater risk for institutional victimization ($AUC = .67$; $r_{pb} = .30$). When compared to Labrecque, Smith and Wooldredge (2014) findings ($AUC = .73, .74$, and $.73$; $r = .22, .23$, and $.22$), the results from this study add support to the conclusion

TABLE 3. Multivariate Logistic Regression Models Predicting Institutional Victimization

Variable	Full Sample		Male Sample		Female Sample	
	AOR	[95% CI]	AOR	[95% CI]	AOR	[95% CI]
Male	1.43**	[1.11, 1.86]	—	—	—	—
Racial minority	0.70***	[0.57, 0.86]	0.61***	[0.49, 0.77]	1.26	[0.78, 2.05]
Married	0.72*	[0.53, 0.98]	0.72	[0.051, 1.03]	0.73	[0.36, 1.49]
High school diploma/GED	1.07	[0.88, 1.31]	1.10	[0.88, 1.37]	0.87	[0.53, 1.42]
No. of prior arrests	0.99	[0.99, 1.00]	0.99	[0.99, 1.00]	1.00	[0.98, 1.01]
Time served	1.24***	[1.17, 1.31]	1.26***	[1.18, 1.33]	1.22**	[1.05, 1.42]
RVNSV moderate-risk ^a	1.86***	[1.33, 2.58]	1.72**	[1.19, 2.47]	2.68*	[1.20, 5.96]
RVNSV high-risk ^a	2.94***	[2.36, 3.67]	2.59***	[2.03, 3.29]	5.24***	[3.06, 8.98]
Constant	0.41***	[0.30, 0.57]	0.66**	[0.49, 0.89]	0.28***	[0.15, 0.53]
Model chi-square	308.65***		235.23***		71.70***	
Pseudo R ²	.11		.11		.15	

Note. GED = general educational development; RVNSV = Inmate Risk Assessment for Violent, Nonsexual Victimization; AOR = adjusted odds ratio; CI = confidence interval.

^aReference group is RVNSV low-risk offenders.

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

that the RVNSV is an effective and valid predictor of inmate victimization. Furthermore, this work shows that the RVNSV is predictively valid for both male ($AUC = .68$; $r_{pb} = .32$) and female inmates ($AUC = .75$; $r_{pb} = .43$). The results from this gendered analysis are stronger than the findings from McCafferty and Scherer's (2017) investigation of the LSI-R:SV (males: $AUC = .602$, $r_{pb} = .184$; females: $AUC = .608$, $r_{pb} = .202$).¹ In addition, the RVNSV persists as a significant predictor for each group even when controlling for other known correlates of victimization.

The study's findings are important, but it is not without limitations. The analyses presented here rely on secondary data from the SVORI evaluation (see Lattimore & Steffey, 2010). As such, the measures used to construct the RVNSV and the dependent variables were collected at the same time on the same inmate survey, which make the findings correlational and not causal. The authors acknowledge that the real measure of any tool lies in its ability to perform in a prospective study, and we encourage other researchers to validate and norm this tool in other jurisdictions. We strongly encourage correctional administrators and researchers to undertake such an investigation. In addition, the data from the SVORI evaluation is not representative of the total inmate population; rather, it oversamples serious, violent offenders. This likely contributes to the differences found in the percentages of inmates in the RVNSV risk group categories between the current investigation and the original Labrecque, Smith and Wooldredge (2014) study (high-risk = 38% compared to 13%, respectively). Given what is known about the victim-offender overlap, it is not surprising that in a sample of more violent inmates, there would also be more victims of violence. We believe that the difference in the composition of this study, however, also adds to the generalizability of the RVNSV. It shows that the tool can predict well not only among the general offender population but also for a subset of serious, violent inmates. Future studies should investigate whether this tool is predictively valid among other offender populations (e.g., jail inmates, racial minorities, juveniles). Finally, the SVORI data define the reference period for victimization as one's entire term of incarceration. Researchers in subsequent investigations should establish a fixed reference period that is consistent with most of the predictive validity research (e.g., 1 year, 2 years).

Despite these limitations, this study provides support that the RVNSV is a valid predictor of institutional victimization in correctional institutions. The replication of the findings from the Labrecque, Smith and Wooldredge (2014) study on a different sample of offenders—males ($N = 1,697$) and females ($N = 357$) in a different country—provide increased support for the RVNSV. It is incumbent upon administrators to take remedial actions to reduce the violence that occurs in correctional institutions. The use of the RVNSV is a practical method for reducing the violence in these facilities, by using a victimization risk instrument to inform decisions related to the management of offenders. These results should encourage correctional authorities and policymakers to consider adopting a tool such as the RVNSV into their inmate classification protocol. Next, we discuss the policy and research implications of this work.

Policy Implications

The findings from this study have direct implications for criminal justice policy and practice in the United States and abroad. Violence in correctional institutions poses a serious problem for the successful control and treatment of inmates (Wooldredge, 1994). Jail and prison administrators are not only responsible for protecting society from inmates, but these authorities are also responsible for protecting those confined from harm (Park, 2001).

A growing body of research indicates that exposure to violence produces several negative psychological (e.g., increased stress; Listwan et al., 2010) and behavioral outcomes (e.g., increased institutional misconduct, increased recidivism). This stresses the importance of identifying those at greatest risk for victimization while also making attempts to prevent this harm before it occurs because it will only get incrementally harder to address after it happens. Just as understanding the influences of perpetrating misconduct is useful for informing approaches to reducing the antecedents of institutional misbehavior, an understanding of the predictors of victimization can be useful for developing preventative strategies that reduce opportunities for victimization (Clarke, 1995). The RVNSV provides a tangible mechanism for correctional administrators to identify inmates who are at the greatest victimization risk. Most important, if agencies identify high-risk inmates and take steps to mitigate these risks, there is a great potential for less institutional violence and fewer victims.

There is research suggesting such preventative strategies are effective in reducing violence and victimization. For instance, inmates who spend more time involved in institutional activities, such as work assignments, education classes, vocational training, recreation, and visitation, are at a lower risk for violent victimization (Pérez et al., 2010; Wooldredge, 1994; Wooldredge & Steiner, 2013). Policies should therefore aim to structure the routines of inmates who are at higher risk for victimization to include more time spent in these types of structured activities. There are also some things inmates can do to reduce one's likelihood to become a victim, including avoiding unsupervised areas or accepting things from other inmates (Meade & Steiner, 2013). Likewise, agencies should inform inmates on the factors that may place him or her at a higher risk (e.g., provide an educational video to make new inmates aware of one's surroundings).

There are also ways correctional institutions can increase the guardianship of high-risk offenders, such as increasing the staff-to-inmate ratio in housing units, circulating staff in common areas, controlling movement within the institution, increasing the use of video surveillance, providing mirrors in low visibility areas, and separating high-risk aggressors from high-risk prey (Morris & Worrall, 2014; Wooldredge & Steiner, 2014). It is also important that correctional officers enforce rules equitably, sanction violators, and prosecute when necessary. Such a strategy will encourage inmates to report acts of violence to authorities. Correctional staff should also receive training on how to detect and respond to violence (Wooldredge & Steiner, 2013).

Finally, it is unlikely that any attempt to reduce violence in correctional institutions will be 100% effective; therefore, it is important that in addition to preventative strategies, agencies also provide support for inmates who are victimized (Taylor, 2015). This should not only include individual counseling and case management services but also cognitive behavioral treatment programs, such as the *Seeking Safety* curriculum (see Zlotnick, Johnson, & Najavits, 2009), which has been shown to reduce symptoms of psychological distress and criminal behavior for female offenders (see also Miller & Najavits, 2012).

Research Implications

The findings of this study and its policy implications are important, but there are also several areas that should be addressed in future research. First, there is currently a considerable amount of debate in the field as to what is the best strategy for maximizing predictive accuracy of risk assessments (see Labrecque & Smith, 2015). We therefore encourage researchers to construct other instruments using different methodologies and statistical

techniques to predict victimization outcomes in hopes that such strategies may yield even better results. Second, we encourage researchers to collect other theoretically important items that were not available to Labrecque, Smith and Wooldredge (2014) or the current investigators (e.g., history of prior abuse, exposure to violence). Researchers should also seek to collect additional dynamic risk factors to include in the development of other risk tools, particularly those that might help serve as treatment targets (e.g., anger, hostility, antisocial attitude). Furthermore, as multilevel investigations reveal varying rates of violence within different institutions (Chen & Shapiro, 2007; Wooldredge & Steiner, 2013), it is possible that the incorporation of facility information and other situational variables (e.g., institutional climate, how inmates are treated) might also increase the usefulness of these instruments (i.e., better prediction, agency targets for change).

Third, future work in this area might also try to predict sexual victimization and poly-victimization. With respect to the former outcome, it is possible that the RVNSV is capable of predicting both nonsexual and sexual victimizations, which would allow prison officials to use only one tool to assess victimization risk. However, it also remains equally possible that the predictors of nonsexual and sexual victimization differ and may require the use of two separate tools. This is an empirical question that should be addressed with further research. With respect to the latter outcome, research suggests inmates with multiple types of victimization may be at an even greater risk for suffering adverse effects compared to those with just one type of victimization (see Listwan, Daigle, Hartman, & Guastaferrro, 2014), which make this outcome another important area for further academic inquiry. Finally, research indicates that victims and offenders in the community share many common characteristics (see Jennings, Piquero, & Reingle, 2012); however, Wooldredge and Steiner (2013) suggest that this victim-offender overlap may not be as strong within correctional institutions. From a practical standpoint, this is important to investigate further because agencies may need to respond differently to an individual who is at high-risk for victimization and low-risk for perpetration versus one who is high-risk for victimization and high-risk for perpetration.

NOTE

1. It should be noted that McCafferty and Scherer (2017) also use data from the SVORI evaluation study, and their study includes any victimization in the community within 15 months of release from prison as the dependent variable.

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APPENDIX**Comparison of Inmate Risk Assessment for Violent, Nonsexual Victimization (RVNSV) Items used in the Creation and Revalidation Studies**

RVNSV Items	Item Measurement	
	Creation Study	Revalidation Study
1. Meets three or more of the sex offense criteria	Inmate met three or more of the following criteria: current offense is incest, previous incest conviction, current offense is pedophilia, previous pedophilia conviction, current offense is sexual assault, previous sexual assault conviction.	Inmate had a current conviction for an attempted or completed sexual offense.
2. Ever an instigator of institutional misconduct	Inmate had an official record of being the perpetrator of institutional misconduct.	Inmate received a disciplinary infraction during current incarceration.
3. Ever placed in segregation for punishment	Inmate had an official record of being placed in segregation as a punishment.	Inmate received administrative segregation during current incarceration as a result of disciplinary infraction.
4. Uses drugs when stressed	Inmate used alcohol or drug use as a means to cope with stress and overwhelming work/home situations.	Inmate used 1 of 13 substances on a weekly basis.
5. Poor regard for others	Inmate displayed a limited or poor regard for others.	Inmate scored above the mean score on the SA-45 hostility scale.
6. Mental health diagnosis (past)	Inmate self-reported or had an official record a mental health diagnosis in the past.	Inmate had received professional care for a mental health disorder in the past.