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# Damaged Goods: Exploring Predictors of Distress in Prison Inmates

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**ABSTRACT**

Victimization is a significant part of the incarceration experience. In this study, we assessed the effects of victimization while incarcerated and pre-existing conditions on prisoners' distress. Data are drawn from surveys administered to 208 men recently released from prison. Using path analysis, we examined the direct effects of victimization and the direct and indirect effects, via victimization, of preprison characteristics and other control variables on distress (symptoms of post-traumatic stress [PTS] and depression). Findings reveal that victimization in prison significantly predicts the occurrence of PTS symptoms and depressive symptoms. Previous trauma, self-control, and race also have direct effects, and previous trauma and race have indirect effects on PTS and depressive symptoms.

**ARTICLE**

As the United States prepares to release prisoners in unprecedented numbers, reintegration and re-entry are increasingly of interest to criminologists. Part of this interest is sparked by recognition that the condition of prisoners on release will influence their ability to desist from crime and reintegrate into law-abiding lifestyles. Most prisoners had few resources and many problems before they began their prison sentence, and there is reason to be concerned that their resources might have depleted and their problems multiplied during incarceration. In the general population, evidence suggests that the likelihood of substance abuse and offending is greatest for those who have experienced adversity (Dembo et al., 1990; Dohrenwend, 2000; Logan, Walker, Staton, & Leukefeld, 2001). The research results on how imprisonment affects future criminality are mixed, however many inmates certainly experience incarceration and some of the events associated with it as adversity (Adams, 1992; Bonta & Gendreau, 1987). It is too early to tell how imprisonment in its contemporary forms affects offenders' chances of success, and far too early to tell how advantages and disadvantages of imprisonment vary by type of offender and type of imprisonment.

Variation in inmates' accounts of their prison experiences and the lasting psychological effects of incarceration is striking. Even those who have served comparable sentences in the same facilities often have experiences that are extremely different. For example, Hemmens and Marquart (1999) surveyed 775 men in a state prison and found that perception of violence and victimization in the institution varied markedly.

Given varied experiences inside and outside the penitentiary, it is not surprising that for some inmates the sufferings of prison are temporary and mild by comparison to the severe and lasting psychological distress reported by others. The same is true of most traumatic events, for example combat, an event that many people are able to put behind them when it is over but that has lifelong negative repercussions for others (Figley, 1978; Port, Engdahl, & Frazier, 2001; Solomon, 2001). Negative life events are known to predict various measures of psychological discomfort and malady similarly. Therefore, research in the area is often grouped under the generic term *distress*. Distress researchers concur that the specific quality of exposure to potentially damaging experiences, individuals' pre-event characteristics, and postevent resources significantly influence the outcome of traumatic events (Benotsch et al., 2000; Breslau, Davis, & Andreski, 1995; Gold et al., 2000; Kessler et al., 1999; McFarlane, 1989). Therefore, a prisoner's condition probably is determined by variation in what happens during incarceration, in resources for overcoming and managing the experience, as well as in individual characteristics on prison entry.

In the current study, we examined variation in symptoms indicative of distress among 208 men recently released from state penitentiaries. The dependent variables are measures of post-traumatic stress (PTS) symptoms and depressive symptoms. The effect of criminal victimization, one of the more salient fears and experiences associated with imprisonment, was our central concern. We also examined the direct and indirect effects of support from free-world friends and family, past traumatic experiences, past exposure to violence, self-control, age, race, and time served.

## *LITERATURE REVIEW*

Hundreds of studies examine the relationship between negative life events and distress. Stressful experiences examined vary in duration, intensity, and severity and include hardships as disparate asworking as a police officer during a disaster, to family economic struggles, to being a prisoner ofwar (Alexander, 1993; Lorenz, Conger, Montague,&Wickrama, 1993; Page, Engdahl, & Eberly, 1991). By comparison to research on other traumatic events, research on imprisonment is primitive. However, penologists have asserted for generations that being imprisoned has lasting influence on social and psychological well being (Bukstel & Kilmann, 1980; Goodstein, 1979; Toch, 1975, 1998). Sykes (1958) suggested, for example, that prison reformers concentrate not on the "recalcitrance of the individual inmate" but on the extent to which the existing system "works in the direction of the prisoner's deterioration rather than his rehabilitation" (p. 134). He recognized that incarceration often entails traumatic events that potentially lead to lasting psychological problems. Although there is voluminous research on predictors of inmate behavior and inmate adjustment, investigation of specific stressors associated with imprisonment and the degree to which consequences are exported beyond prison gates is rare (Adams, 1992).

## *MENTAL HEALTH AND DISTRESS*

Prisoners hail disproportionately from economically and socially disadvantaged circumstances in which violence, substance abuse, family disruption, and other traumatic experiences are common. Overall, they have experienced many more potentially damaging life experiences than their never-imprisoned counterparts. One survey of male inmates revealed, for example, that respondents had experienced 3 times the number of traumatic events than had noninstitutionalized comparison groups (Guthrie, 1999).

In addition to prevalent experiential hardships, prisoners exhibit high rates of psychological disorders. Nearly 20% of U.S. inmates have spent one night or more in mental health treatment facilities or self-report a mental illness (Bureau of Justice Statistics, 1997).Adiagnostic study conducted in one U.S. prison demonstrates that prisoners are more likely to have substance abuse problems and mental disorders than the general population. Of these participants, 86% received at least one psychiatric diagnosis (Chiles, von Cleve, Jemelka, & Trupin, 1990). Other investigators have shown that prisoners have high rates of personality disorders (Davison, Leese, & Taylor, 2001), affective disorders, functional psychosis (Smith, O'Neal, Tobin, & Walshe, 1996), depression, post-traumatic stress disorder (PTSD; Brinded et al., 2001), and many other psychological problems (Hodgins & Cote, 1990).

Incarceration is but one potentially damaging hardship in many inmates' troubled lives. Highlighting this point, Maden, Chamberlain, and Gunn (2000) contended that deliberate self-harm by inmates results from longterm personality problems and "cannot be simply attributed to short-term environmental stress" (p. 203). Other authors noted that inmates enter prison with backgrounds and characteristics that affect their relationships with other inmates and correctional staff as well as their ability to cope with anxiety and objective difficulties (Gullone, Jones,&Cummins, 2000; Silverman&Vega, 1990; Verona, Patrick,&Joiner, 2001). The effects of imprisonment are contingent on individual characteristics including ability to successfully manage life in prison environments (Adams, 1992; Bonta & Gendreau, 1987; Derosia, 1998; Harding & Zimmerman, 1989; Toch, 1975; Zamble & Porporino, 1988).

Variation in conditions of confinement correlates with prisoner distress (Kupers, 1996). For example, Cooper & Berwick (2001) studied 171 male inmates serving different sentences. They concluded that anxiety, depression, and psychological morbidity are predicted by "environmental hassles" and worries associated with day-to-day living conditions. Other significant predictors of these symptoms included a lack of close friends outside prison, psychiatric history, and disinclination to participate in diversionary activities. Guthrie (1999) investigated predictors of PTSD in a convenience sample of 100 male federal inmates and found 30% prevalence. He concluded that imprisonment can result in PTSD but noted that most of the sample's positive cases had complicated trauma histories.

## *VICTIMIZATION*

The threat of violence and criminal victimization in U.S. prisons weighs heavily on the minds of many inmates (McCorkle, 1992, 1993b; Wright,

1991). In his investigation of fear of victimization and mental health among inmates, McCorkle (1993a) drewon data from 300 Tennessee men. He found that fear of victimization is a significant predictor of well being controlling for preincarceration disorders.

No nationally representative studies have been done on prison victimization, however it is clear that many U.S. prisoners fall prey to other inmates.A survey of inmates in three Ohio prisons found that one half had been victims of a crime and 10% had been assaulted in the previous 6 months (Wooldredge, 1994). Official records of inmates in 36 New York facilities reveal that 10% were cited for assault in a 3-year period; 13% for theft; and 12% for vandalism (Wooldredge & Carboneau, 1998). In a study of 500 male inmates in Tennessee, 25% self-reported that they routinely go armed with a "shank" or other weapon for self-protection (McCorkle, 1992). Although most prisoners feel safe much of the time and most adjust to institutional life, some are victimized repeatedly and over long periods of time (Edgar & O'Donnell, 1998; McCorkle, 1993b;O'Donnell&Edgar, 1998). Suffice it to say that in many prisons fear of crime is grounded in reality.

Most investigators of victimization in prison have focused solely on violent victimization. This focus, although understandable, obscures the toll that nonviolent or routine criminal victimization may take on inmates (O'Donnell & Edgar, 1998). Numerous studies found that some inmates are viewed as easy targets. These vulnerable prisoners endure repeated harassment by theft, robbery, vandalism, fraud, and other offenses, often with the threat of violence underlying all the crimes (O'Donnell & Edgar, 1998; Sykes, 1958; Toch, 1992). Even a single nonviolent offense committed against free citizens can have lasting psychological consequences and affect future perception of security (Davis, Taylor, & Lurigio, 1996; Denkers & Winkel, 1997; Hraba, Lorenz, Pechacova, & Bao, 1999; Norris & Kaniasty, 1994). Several studies have shown that household burglary significantly predicts depressive symptoms and psychological difficulties and that these symptoms often last for months (Beaton, Cook, Cavanaugh, & Herrington, 2000; Caballero, Ramos,& Saltijeral, 2000). Considering the effects of criminal victimization in the general population, there is reason to believe that victimization in prison affects prisoners' distress levels, especially when victimization is repeated. Prison victims live with their offenders.

## *EXOGENOUS PREDICTORS*

Investigators have always struggled with the fact that inmates enter prison with varying backgrounds, characteristics, and states of mental health. Therefore, adverse effects of imprisonment are difficult to demonstrate. A prisoner's current psychological well-being might not result from events that occurred in prison. It is quite possible that the origins of distress predate incarceration and that adverse experience in prison results from pre-existing characteristics and conditions. For these reasons, it is important for penologists interested in prison events and outcomes to investigate direct and indirect effects of exogenous variables on the outcome of interest.

### *Control Variables*

At a minimum, investigators should account for the effects of race, age, and time served. Victimization is more likely for the young and for those who

have not served long sentences (Wooldredge & Carboneau, 1998). In general, psychological well-being improves as prisoners become accustomed to the prison environment, however younger inmates experience fewer psychological problems (Bonta & Gendreau, 1987; Wooldredge, 1999). Race, although confounded with urban poverty and income before entry, is thought to affect several aspects of prison adjustment. Generally, non-Whites are victimized more than Whites, however persons of higher socioeconomic status are victimized more than persons of lower socioeconomic status. There is some evidence that non-Whites adjust more readily and suffer fewer lasting psychological consequences from imprisonment (Adams, 1992; Guthrie, 1999).

***Supportive relationships***

Previous literature from the stress-distress tradition emphasizes the importance of social support as a protective mechanism against distress (Ross & Mirowsky, 1989). Supportive relationships reduce levels of distress in the general population (Tontodonato & Erez, 1994; Turner, 1981). In prisoner populations, most research confirms that support diminishes the effects of violence and other hardship on various measures of well-being (Biggam & Power, 1997; Cooper & Berwick, 2001; Maitland & Sluder, 1996; McCorkle, 1993b;Wooldredge, 1999). Social support also is thought to be a critical variable in understanding offenders' chances of rehabilitating, although the mechanisms that explain its importance are scantly understood (Cullen, Wright, & Chamlin, 1999).

Support could have direct and indirect effects via prison experiences on released prisoners' well-being for a number of reasons. Prisoners who have weak support networks, if only because they have undermined them previously, might be more likely to face victimization in prison and to suffer its ultimate effects. Characteristics resulting from or that contributed to weak support systems might eventuate in difficulty in prison. Prisoners without support are more completely institutionalized, are more dependent on the informal inmate economy, and have fewer advocates to help them solicit aid from prison administrators when trying to cope with or escape dangerous situations.

***Traumatic Events***

Many inmates have endured multiple traumatic events in their lives. Prisoners are more likely, for example, to have witnessed or been victimized by acts of violence. In fact, 10% of male prisoners self-report, with a self defined classification of abuse, that they were physically or sexually abused in youth (Harlow, 1999). Traumatic events affect future distress levels, especially when they occur in concert (Norris, 1992). Moreover, some evidence suggests that earlier victimization and trauma may increase vulnerability to future victimization (Duncan, 1999). Therefore, previous harmful events may influence current distress directly or have indirect effects because they increase the chances of victimization.

***Exposure to Violence***

Many street offenders come to prison from environments and lifestyles

where violence is common. The effects of exposure to violence, or what might be called participation in street life, on imprisonment and future wellbeing is largely unexplored. As with the other exogenous variables, an offender's exposure to violence might influence interactions with other inmates or have direct effects on distress.

### *Self-control*

Exposure to trauma can be viewed as a measure of lifestyle, personality, or of an individual's capacity for making good decisions (Breslau et al., 1995). It is arguable that certain individuals find trouble in prison just as they find it in freedom. Some inmates enter the penitentiary with emotional scars or personality defects that make interactions with other inmates hostile. For example, Biggam & Power (1999a, 1999b) found that victims of inmate bullying had greater levels of distress, however they also had poorer means-end thinking skills. Similarly, researchers of incarcerated young offenders find that the poor parenting and distress relationship is mediated by poor-quality peer relations (Chambers, Power, Loucks, & Swanson, 2000). A reasonable criticism of overly simplistic models of trauma and distress is that both variables might be outcomes of pre-existing personality traits. For example, Gottfredson and Hirschi (1990) argued that self-control is the most important variable in explaining crime and other dangerous decisions. Their self-control construct, theoretically, captures a consistent cognitive style that makes a person more or less predisposed to impetuous, self-serving, and shortsighted choices. From this perspective, almost any troubling event or manifestation of trouble results from low self-control. Self-control may directly affect psychological outcomes because offenders with low levels of it feel destined to fail or have an overly pessimistic understanding of their situation. Indirect effects of self-control may result from the effect of the trait on the occurrence of unfortunate circumstances. Low self-control could lead to interpersonal difficulties with other prisoners that result in victimization.

## *SAMPLE AND METHOD*

Data for the current study were collected between September 10 and December 4, 2001. The 208 participants in the study were male residents of work release facilities in a midwestern state. All were recently paroled from state prison (less than 6 months) and were within a few months of being released into less restrictive community supervision. The men served their last prison sentences in prisons located across the state.

We attempted to recruit all residents of the facilities into the study. The facilities operate at a full capacity of 480 persons. At each facility, we advertised in brochures and by regular intercom announcements in advance that researchers would be administering surveys the following week. The advertisement promised that information in the study was confidential and reassured residents of the right to refuse any question. Participants were paid $30 cash for 1 to 2 hours of their time. Two hundred and eight (208) participants, all that responded to our invitation, participated in the study.[1] The participants did not differ dramatically from the general population of the facilities we visited or from released inmates in the state. They are similar to released state inmates on age (sample 32 years old; population 31), race (sample 61% White; population 72% White), offense type (sample 28% violent, 22% drug; population 28% violent, 22% drug), and time served (sample 38

months; population 29 months).We are aware that inmate composition varies by state and that imprisonment is different from state to state and between institutions. Standard cautions for convenience samples should be taken in interpreting and generalizing our findings.

The survey was administered to groups of fewer than 20 in a classroom setting. Proctors were on hand for those who needed assistance reading or discerning the meaning of any question. We included several questions to improve confidence that participants were reading each question carefully and not filling out the survey randomly.[2]

### *Models and Measurement*

We examine hypothetical models of the effects of prison victimization and the direct and indirect effects of preprison characteristics on distress. Exogenous variables examined were (a) preincarceration trauma in inmates' lives, (b) support given by family and friends while incarcerated, (c) self-control, (d) race, (e) age, (f) previous exposure to violence, and (g) time served in prison. The model we examined tests for 13 paths, is exploratory, and is fully recursive, however three hypotheses guided the analysis. We hypothesized that prison victimization is a significant predictor of depressive and PTS controlling for other variables. We hypothesized that previous trauma significantly affects distress measures. We hypothesized that prison victimization links pre-existing characteristics to postprison distress.

Our two dependent variables are measures of depressive symptoms and post-tramautic stress symptoms. The measure for post-traumatic stress symptoms is derived from the Post Traumatic Stress Diagnostic Scale used in the University of Michigan Composite International Diagnostic Interview (UM-CIDI; Wittchen, Kessler, Zao, & Abelson, 1995). Respondents were asked to reference the worst event that occurred as a result of their imprisonment. The measure reflects the occurrence of 17 symptoms such as having nightmares, getting upset when a situation reminded them of the event, and loss of warmth or feeling toward others (1 = yes, 0 = no). Positive responses were added into a symptom count.[3] The second depressive symptoms measure captured current symptoms using 12 items derived from the Symptoms Checklist 90–Revised (SCL-90-R; Derogatis & Melisaratos, 1983). The 12 items have answer sets based on the occurrence of feelings in the last week such as crying easily, feeling lonely, feeling blue, and feeling worthless (0 = *not a bit*, 5 = *extremely*). The measure was reliable ($\alpha$ = .88).

We constructed the prison victimization variable by adding responses to six items that measure the frequency of victimization per month. The victimization measure includes theft, con games and scams, robbery, destruction of property, assault, and serious threats of bodily injury. The mean number of offenses suffered per month was .89 with a standard deviation of 2.63. The respondents were victimized almost once a month on average.[4] The measure does not differentiate the impact of severely traumatizing victimization that occurs infrequently from more common and less severe victimization. It is intended to be an indicator of sustained vulnerability and repeat victimization.

The exogenous trauma variable is based on a series of questions that asks whether respondents experienced a series of traumatic events before incarceration. The five events are based on those in the UM-CIDI (Wittchen et al.,

1995). The items measure combat experience in war, life-threatening accident, sexual molestation, a great shock because of the violent victimization of a loved one, and one item refers to being held hostage, threatened with a weapon, or kidnapped. The occurrence of each of these events (0 = *never*, 1 = *ever*) was added to form a single measure. The mean score was 1.4 with a standard deviation of 1.2. The theoretical advantages of capturing multiple exposures to trauma outweighed the analytic advantage of dummy coding according to the occurrence of any trauma. As is usually the case in studies of negative life events, this variable is best understood as a count and not as a latent variable composed of multiple items. As can be expected of multiple questions indicating the occurrence of rare events, the measure was not reliable, however we report Cronbach's alpha to satisfy the reader's curiosity (⟨ = .40).

Our measure of support included three items designed to measure frequency of supportive contact.[5] These questions addressed communication with family and friends outside prison. These include the number of letters mailed to family and friends, letters received, and telephone calls made per month. The mean score was 11.7 with a standard deviation of 8.6.

The measure of exposure to violence is based on three questions that refer to the year before the respondent was last incarcerated. The questions ask howoften the respondent pulled a weapon on someone, sawsomeone injured in a fight, or saw someone else pull a weapon on someone. The answer sets range from 0 to 4 (*never*, *1 to 2 times*, *about once a month*, *about once a week*, and *2 to 3 times a week or more*).With a minimum of 0 and a maximum of 12, the mean score was 3.5 with a standard deviation of 2.8. The reliability of the measure was high (⟨ = .86).

The self-control variable is measured with the established Grasmick et al. self-control scale used in dozens of papers (Grasmick, Tittle, Bursik, & Ankelev, 1993; Pratt & Cullen, 2000). An item example is "I don't devote much thought and effort to preparing for the future" (1 = *strongly agree*, 5 = *strongly disagree*). As occurs in most studies that utilize the scale, reliability is fairly high (⟨ = .85), however factor analysis indicates that readers should take caution in assuming that the scale reflects a unidimensional construct.[6] Because self-control is not the sole focus of this article, we followed the convention where the self-control variable is an additive composite of the *z* scores for the 24-item scale.

Age is the respondent's age in years at the time of the survey. Time served is the number of months served in the last period of imprisonment. Race is the respondent's self-reported race dummy coded so that 0 is White and 1 is non-White.

## *RESULTS*

The correlation coefficients for the measures are presented in Table 1. Depression and PTS symptoms are correlated (*r* = .42). Prison victimization (*r* = .33), preprison trauma (*r* = .32), exposure to violence (*r* = .20), selfcontrol (*r* = –.17) and race (*r* = –.12) are positively correlated with PTS symptoms. Current depressive symptoms correlate in a positive direction with prison victimization (*r* = .25), exposure to violence (*r* = .13), previous trauma (*r* = .21), self-control (*r* = –.36), and race (–.15). Prison victimization corre-

lates positively with preprison trauma ($r$ = .25) and exposure to violence ($r$ = .20).

Structural equation models were estimated using AMOS 4 (Arbuckle, 2000). Because of the small sample size, the models are estimated using the composite scales as indicators of each of the constructs in the theoretical model. The results can be interpreted as standardized ordinary least squares regression coefficients for path models. Each measure serves as a single indicator of the latent construct.We present only fully recursive models. Therefore, chi-square and degrees of freedom are equal to zero and reporting of fit statistics is inappropriate.

### *Model for PTS Symptoms*

Standardized coefficients are presented for the PTS model in Figure 1. Table 2 reports the decomposition of effects for the model. Prison victimization is a significant predictor of PTS symptoms, explaining 10% of the variation. Race, previous trauma, and self-control also had direct effects on PTS symptoms. Being non-White reduced the count of symptoms, as did higher self-control. Previous trauma increased symptoms.

The direct relationships between PTS symptoms and social support, age, exposure to violence, and time served were insignificant controlling for effects of other variables.

Our analysis revealed three significant paths leading from exogenous variables (race, previous trauma, and exposure to violence) to prison victimization. This suggests that non-White prisoners and those who had lowlevels of exposure to violence and traumatic events before prison are the most infrequently victimized. Race and previous trauma had significant indirect effects on PTS symptoms via victimization (Table 2). Correlations between race and age, age and time served, exposure to violence and race, exposure to violence and self-control, exposure to violence and previous trauma, and previous trauma and time served were significant.

### *Model for Depressive Symptoms*

Recall that the measure of PTS symptoms reflects their occurrence at any time during imprisonment and the measure of general depressive symptoms captures respondents' current levels of general and more widely occurring depressive symptoms. General depressive symptoms and PTS symptoms were correlated in our data ($r$ = .18; Table 1). Prison victimization explained about 6% of the variation in depressive symptoms in the zero-order correlation and achieved significance in the full model (Figure 2).

TABLE 1: Bivariate Correlations

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | M | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Posttraumatic stress symptoms | — | .42** | .33** | −.02 | −.17** | .32** | .20** | −.12* | .02 | .10 | 4.6 | 4.6 |
| Depressive symptoms | | — | .25** | −.09 | −.36** | .21** | .13* | −.15** | −.00 | .02 | 7.2 | 7.0 |
| Prison victimization | | | — | .05 | −.04 | .22** | .20** | −.08 | −.04 | .05 | 0.9 | 2.6 |
| Family/friend support | | | | — | .02 | −.01 | .01 | −.08 | −.05 | −.02 | 11.7 | 8.6 |
| Self-control | | | | | — | −.01 | −.22** | .09 | .04 | −.02 | 5.4 | 13.5 |
| Preprison trauma | | | | | | — | .35** | .04 | .04 | .18** | 1.4 | 1.2 |
| Exposure to violence | | | | | | | — | .30** | −.11 | .16** | 3.5 | 2.8 |
| Race | | | | | | | | — | −.11 | .01 | 0.4 | 10.5 |
| Age | | | | | | | | | — | .74** | 29.4 | 7.3 |
| Months served | | | | | | | | | | — | 38.4 | 48.14 |

NOTE: *$p < .10$. **$p < .05$.

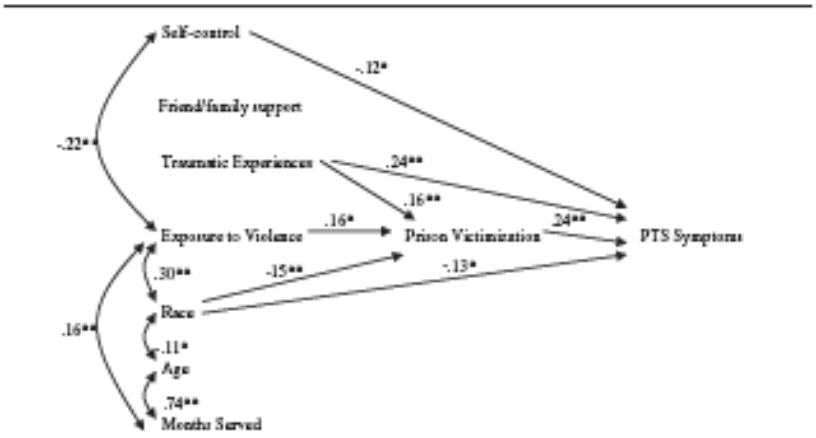


Figure 1: PTS Symptoms Model
NOTE: Only paths significant at $p < .10$ are pictured.
*$p < .10$. **$p < .05$.

The decomposition of effects for the model for depressive symptoms is presented in Table 3. Previous trauma, race, and self-control all had direct effects on depressive symptoms just as they did on PTS symptoms. Previous trauma, exposure to violence, and race had significant indirect effects, although exposure to violence did not have a significant total effect. Support, age, and time served have no significant effects on symptoms.

## *DISCUSSION AND CONCLUSION*

Many inmates exit prison with problems that impede future success. Recidivism rates in the United States evidence this. More than one half of released inmates are convicted of a new felony or serious misdemeanor within 3 years (Beck & Shipley, 1985). The nature and origins of released prisoners'apparent troubles and the extent to which they accompany inmates entering and exiting penitentiaries are unresolved issues.

The most important theoretical and empirical finding in the current study is that prison victimization contributes to the occurrence of depressive and PTS symptoms, confirming our first hypothesis. Although depressive symptoms can certainly lead to problems in the short run, PTS symptoms are more serious and potentially lead to recurring problems. An additional finding is that previous trauma is indirectly related to symptoms via victimization. This indicates that damage done before incarceration contributes to prison victimization and, thereby, to its ultimate effects. Our finding that previous trauma

TABLE 2: PTS Symptoms Model: Decomposition of Effects

| | *Prison Victimization* | *Family/ Friend Support* | *Self-Control* | *Preprison Trauma* | *Exposure to Violence* | *Race* | *Age* | *Months Served* |
|---|---|---|---|---|---|---|---|---|
| PTS symptoms | | | | | | | | |
| Direct | .24** | −.04 | −.12* | .24** | .08 | −.13* | −.01 | .02 |
| Indirect | .00 | .01 | −.00 | .04** | .04 | −.03** | −.02 | .01 |
| Total | .24** | −.03 | −.12* | .28** | .12 | −.16** | −.01 | .03 |
| Prison victimization | | | | | | | | |
| Direct | — | .03 | .01 | .16** | .16* | −.14** | −.10 | .07 |

NOTE: *$p < .10$. **$p < .05$.

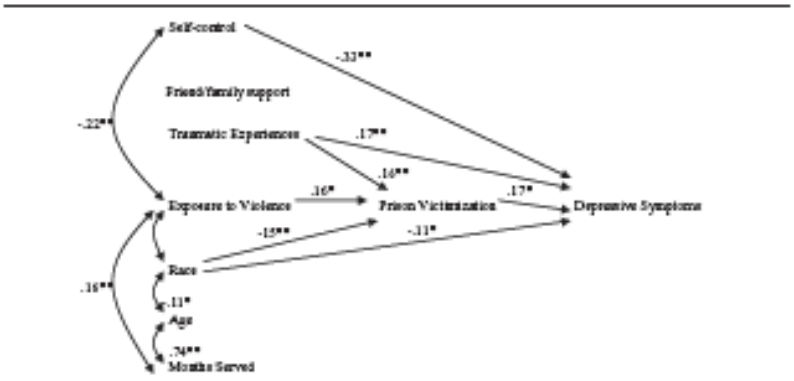


Figure 2: Depressive Symptoms Model
NOTE: Only paths significant at $p < .10$ are pictured.
$^{*}p < .10$. $^{**}p < .05$.

is a significant direct and indirect predictor of distress confirms our second hypothesis. Prison victimization adds to the pains of pre-existing events, although prison victimization does not mediate the effects of previous events on outcomes.

Exposure to violence is the only variable that operates purely through its indirect effect on victimization in either the depressive symptoms or PTS equations. Findings lean toward disconfirmation of our third hypothesis, concerning the mediating effects of victimization. Self-control, race, and previous trauma have direct effects on distress measures. Victimization clearly is not the reason that self-control, race, and previous trauma predict symptoms. However, previous trauma, exposure to violence, and being non-White increases the frequency of victimization and frequent victimization results in increased symptoms.

There is evidence in our analysis that preprison events, previous trauma, and exposure to violence predict victimization in prison. Our analysis calls into question interpretations suggesting that self-control is the reason for the link. The self-control variable is a strongly significant direct predictor of depressive symptoms and a weaker predictor of PTS symptoms, however it is not a predictor of victimization. Moreover, victimization predicts distress, even when self-control and other antecedent characteristics are controlled. Taken together, our findings undermine interpretations of distress measures as being mere indicators of personal shortcomings among the prisoners.We do not know what mechanism links previous events to prison victimization and distress, however self-control is an insufficient explanation.

Although limitations in research design and results that achieve statistical significance without achieving great explanatory power justify cautious

TABLE 3: Depressive Symptoms Model: Decomposition of Effects

| | *Prison Victimization* | *Family/ Friend Support* | *Self-Control* | *Preprison Trauma* | *Exposure to Violence* | *Race* | *Age* | *Months Served* |
|---|---|---|---|---|---|---|---|---|
| Depressive symptoms | | | | | | | | |
| Direct | .20* | −.10 | −.33** | .17** | .01 | −.11* | .04 | −.06 |
| Indirect | .00 | −.01 | −.00 | .03* | .03* | −.03** | −.02 | .01 |
| Total | .20* | −.10 | −.33** | .21** | .04 | −.14** | .02 | −.05 |
| Prison victimization | | | | | | | | |
| Direct | — | .03 | .01 | .16** | .16* | −.14** | −.10 | .07 |

NOTE: *$p < .10$. **$p < .05$.

interpretation, the implications of the current study are disturbing. After all, most efforts of criminal justice practitioners toward rehabilitation of released inmates are thought to have modest effects. It is easy to imagine that these efforts might be offset by impairment resulting from hardship in prison. The current study suggests that prisoners who experienced victimization also exhibited higher rates of the same emotions that many treatment programs

are designed to prevent. Correlation between depressive and PTS symptoms, hostility, anxiety, and other aspects of mental health are well documented and present in the current study (Aneshensel, Rutter, & Lachenbruch, 1991; Coyne & Downey, 1991). We chose to examine depressive symptoms only because of their theoretical centrality in distress research.

Those who have experienced some forms of stress earlier in life are more likely to experience subsequent deleterious events. Feasibly, men exhibiting symptoms of earlier difficulties or who have experienced trauma before imprisonment are vulnerable to future victimization. They may have more difficulty befriending prisoners, refraining from participation in the inmate economy, or may fail to take precautionary measures. The significant effect of preprison trauma on symptoms suggests that trauma before incarceration shapes inmate well-being directly and indirectly. This finding speaks to the importance of dealing with inmates' problems and classifying them into safe treatment facilities on entry. Rehabilitative efforts should help inmates recover from trauma occurring inside and outside prison.

We found that supportive relationships do not significantly affect distress. Some inmates observe that free-world relationships are irrelevant to prison life and in some cases add to the hardship of imprisonment because institutional life so thoroughly restricts maintenance of familial and social responsibilities (Toch, 1992). Outside supporters probably cannot protect inmates from victimization or offer a great deal of help to distressed inmates.

One flaw of the current study is that it is based on cross-sectional and retrospective data. We cannot determine how the stage of criminal justice processing shapes results. For now, we cannot determine if events that occur in prison have any bearing on rehabilitation and future success. Future researchers should contact inmates at various points in their sentences to determine with greater precision the direction and result of the relationships we examined. There is a great deal of work to be done in understanding the prison experience and its outcomes. Why do men who enter the prison with histories of trauma get victimized most? If their participation in inmate transactions is to blame, why do they participate more? Is victimization correlated with other difficulties in prison? Does difficult prison time, measured with a wider array of variables than used here, result in difficulties in freedom and future offending? The importance of these questions aside, we repeat the well-worn advice that informed debate and studies of punishment should recognize potential advantages and disadvantages of imprisonment. Advantageous and disadvantageous events may operate simultaneously, have developmental links, and also may interact with scores of individual- and program-level variables to determine outcome. When prison experiences are interpreted as adversity, it is clear why understanding and dealing with depression and other potential consequences of hardship in released prisoners may be relevant to understanding the risk they pose.

## *NOTES*

1. In the interest of human subjects protocol, we avoided creating the impression of coercion by contacting participants only once. This prevented us from contacting nonrespondents and resulted in a low (43%) response rate.

2. Only two respondents failed to accomplish the simple tasks required in these questions, and inclusion or exclusion of these participants had no significant effect on findings.

3. Omission of the PTSD time dimension means that the presence of symptoms should not be taken as indicators of the clinical presence of a stress disorder. Nevertheless, some investigators found that the correlation between symptom-based measures and clinical diagnosis improves with omission of time criteria (Peters, Andrews, Cottler, & Chatterji, 1996).

4. The answer sets for these items were (0 = *never*; 1 = *about 1 to 2 times*; 2 = *about once a month*; 3=*about once a week*; 4=*2 to 3 times a week or more*) and in this form the 〈 = .58. In an effort to get a more accurate frequency, those who answered 1 were recoded to 1.5/months served. We recoded other responses to approximate the number of victimizations per month. Possible values include 0, 1.5/months served, 1, 4, and 10. All items were then added to estimate frequency of victimization.

5. Admittedly, this is an unconventional measure of support. Unfortunately, more conventional measures were not included in the survey. However, many items from widely accepted measures do not suit the prison context. For example, conventional support measures often include items such as "I have friends with similar interests" that could result in misleading results among inmates. We decided to focus on support from free-world family and friends given the institutional location of our participants between prison and freedom. The items were coded per month following the method described in the previous footnote. Before recoding, the items were reliable (〈 = .76), however inclusion of the 1.5/months served category and transformation of the variable to a count does not allow for the use of Cronbach's alpha.

6. We conducted extensive confirmatory and exploratory factor analysis on this variable to assess its unidimensionality and reliability. Results in the form of another manuscript are available on request. In sum, we decided that the high alpha and the fact that themeasure is established justified its use despite complications in the confirmatory analysis.

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