

Major Risk Factors for Recidivism Among Offenders with Mental Illness

Table of Contents

Purpose	2
Statement of the Problem	2
The “Direct Cause” Policy Response.....	3
Limitations of the Direct Cause Response	3
Toward a Solution.....	4
Recognizing Heterogeneity Among Offenders	4
Toward Addressing Heterogeneity.....	5
Criminogenic Risk Factors for Offenders with Mental Illness	6
The Forest: “Central Eight” as a Group.....	6
The Trees: Big 4	6
<i>Established History of Criminal Behavior</i>	7
<i>Antisocial Personality Pattern</i>	7
<i>Antisocial Cognition</i>	8
<i>Antisocial Associates</i>	9
The Saplings: Moderate Four	9
<i>Substance Abuse Problems</i>	9
<i>Employment Instability</i>	10
<i>Low Engagement in Prosocial Leisure Pursuits</i>	11
<i>Family and Marital Problems</i>	11
Implications.....	12
Risk Assessment	12
Treatment.....	13
References.....	16

Purpose

Over one million individuals with serious mental illness are under some form of correctional supervision in the U.S. Even with specialized programs in place, offenders with mental illness are substantially more likely than their relatively healthy counterparts to recidivate. Part of the reason current programs may fail is that they are rooted in a “direct cause” policy model that casts mental illness as the cause of criminal justice involvement and mental health services as the solution. Substantial evidence indicates that the positive clinical outcomes observed for effective mental health services (e.g., functional improvement) rarely translate into positive criminal justice outcomes (e.g., reduced recidivism). Moreover, the “direct cause” model fits only a minority of OMIs (perhaps 1 in 10); the vast majority have developed the same proximate, powerful risk factors for recidivism as offenders who are not mentally ill, including adherence to antisocial beliefs and attitudes, deficits in self-regulation, and poor problem solving skills. Cognitive-behavioral treatment (CBT) programs that explicitly target these risk factors are well validated for reducing recidivism and are widely implemented in criminal justice settings--but not with OMIs.

This review provides evidence that the current policy model should be expanded to encompass indirect causation and CBT. Doing so may improve our ability to reliably reduce recidivism in programs for this population. We begin by presenting the nature of the problem, i.e., poor criminal justice outcomes for offenders with mental illness (*“Statement of the Problem”*). We then provide an overview of how these outcomes may be improved by adopting a more nuanced view of the major factors that can maintain criminal behavior for this heterogeneous (*“Toward a Solution”*). After systematically reviewing evidence that offenders with mental illness share core risk factors for recidivism with offenders who are not mentally ill (*“Criminogenic Risk Factors”*), we briefly outline implications for future research and policy (*“Implications”*). If targeting major risk factors for recidivism reduces reoffending as expected, this focus should be added to current, mental-health-focused interventions to improve outcomes for offenders with mental illness.

Statement of the Problem

Individuals with serious and often disabling mental illnesses like schizophrenia, bipolar disorder, and major depression are grossly overrepresented in the criminal justice system. Compared to the general population, the prevalence of these illnesses among jail detainees is two to three times higher (Teplin, 1990; Teplin, Abram, & McClelland, 1996). Moreover, nearly 3 of 4 jail detainees with mental illness have a co-occurring substance abuse disorder (Abram & Teplin, 1991; Abram, Teplin, & McClelland, 2003). These figures take on new meaning when considered in context. The number of individuals under correctional supervision in the U.S. recently reached an all-time high of over 7.3 million (BJS, 2009). Although prevalence estimates vary, a meta-analysis of 62 studies suggests that 14% of offenders suffer from a major mental illness (Fazel & Danesh, 2002; see also Steadman, Osher, Robbins, Case, & Samuels, 2009). If so, there are over one million individuals with mental illness in the U.S. in jail, in prison, on probation, or on parole.

The vast majority of these individuals are supervised in the community on probation or parole (BJS, 2009). Compared to their relatively healthy counterparts, offenders with mental illness are substantially more likely to have their community term of parole revoked (Baillargeon, Binswanger, Penn, Williams, & Murray, 2009; Eno Louden & Skeem, 2011; Messina, Burdon, Hagopian, & Prendergast, 2004).

These figures are sobering. They indicate that a large number of individuals with serious mental illness

are involved in the criminal justice system and many fail the re-entry process, plunging more deeply into the criminal justice system over time. For this population, the chief policy goal arguably is reduced recidivism and exit from the criminal justice system (see GAINS Center, 2010; Skeem, Manchak, & Peterson, 2010). Re-arrest, revocation, and re-incarceration have ill effects on public safety, public spending, and public health; presently, public safety and spending concerns are salient. Indeed, the slogan, “fight crime and save money,” is driving a national movement to replace mass incarceration policies with an emphasis on evidence-based community corrections (Aos, 2010; Aos, Miller & Drake, 2006). For this population, however, recidivism also has far-reaching public health implications. When OMI are (re)incarcerated, they are particularly susceptible to psychiatric deterioration, self-harm, victimization, and placement in segregation (Blitz, Wolff, & Shi, 2008; Metzner & Fellner, 2010; Toch, 2002), which in itself has serious adverse effects on mental health (Haney, 2003).

The “Direct Cause” Policy Response

The prevalence and poor outcomes of OMI have attracted remarkable attention from national policymakers and practitioners; particularly from those involved in the criminal justice system (American Probation and Parole Association, 2003; Bureau of Justice Assistance, 2009; National Institute of Corrections, 2009). Numerous federal initiatives and local programs have been launched for this population over recent years (for a review, see Skeem et al. 2010). Although these efforts are diverse, they are united by an assumption that mental illness is the direct cause of criminal justice involvement, and mental health treatment is the solution. That is, “people on the front lines every day believe too many people with mental illness become involved in the criminal justice system because the mental health system has somehow failed. They believe that if many of the people with mental illness received the services they needed, they would not end up under arrest, in jail, or facing charges in court” (Council of State Governments, 2002, p. 26).

Given that mental illness is perceived as the root of the problem, provision of effective mental health services historically has been cast as the lynchpin to successful response (e.g., CSG, 2002). At the federal level, this is implied by the very name of the “Mentally Ill Offender Treatment and Crime Reduction Act” (U.S. Congress, 208th, 2nd session, 2004), which authorized funding for programs that target this population. From jail diversion to prison re-entry, virtually all programs for this population are designed to link offenders to mental health services (Skeem et al., 2010). Thus, there has been a “proliferation of case management services as the policy response” (Draine, Wilson, & Pogorzelski, 2007, p. 161). Generally, criminal justice involvement is used to mandate or link the individual to treatment (e.g., a parolee is required to take medication and attend appointments), and treatment is thought to reduce the risk of recidivism.

There is, at best, mixed evidence that programs based on the direct cause model are effective in reducing reoffending for offenders with mental illness. Skeem et al. (2010) reviewed the most rigorous experimental and quasi-experimental studies available on six types of contemporary programs that also generally represent the direct cause model (e.g., jail diversion, prison re-entry). The results indicated that these programs often successfully link offenders with psychiatric treatment and sometimes reduce their symptoms and distress, but this rarely translates into reduced recidivism. The evidence was weakest for models that were strongly mental-health based (e.g., Forensic Intensive Case Management) and mixed for models that emphasized supervision by courts or probation officers (e.g., specialty probation and mental health courts).

Limitations of the Direct Cause Response

A relatively large body of evidence challenges the direct cause model as an explanation for criminal behavior for most offenders with mental illness. From a policy perspective, this implies that we are

unlikely to reach the chief policy goal by simply implementing mental health treatment programs that have been shown to improve psychiatric symptoms and functioning.

In multiple rigorous experiments, high fidelity evidence-based mental health services have not affected criminal justice outcomes. For example, based on a sample of 223 patients with co-occurring disorders who were randomly assigned to Assertive Community Treatment (ACT) versus standard case management, Clark, Ricketts, & McHugo (1999) found no treatment-related difference in police contacts (80%) and arrests (44%) over a three year period. In another randomized controlled trial for patients with co-occurring disorders, Calsyn, Yonker, Lemmin, Morse, & Klinkenberg (2005) found no treatment-related difference in arrests and incarcerations between those assigned to ACT, Integrated Dual Diagnosis Treatment (IDDT), or treatment as usual. Similar results were obtained for a sample of offenders with co-occurring disorders who were randomly assigned to IDDT or treatment as usual (Chandler & Spicer, 2006). Given such results, scholars have cautioned that positive clinical outcomes observed for evidence-based mental services (e.g., reduced hospitalization, improved symptoms) will not necessarily extend to criminal behavior, and have called for “interventions that specifically target reduction of criminal behavior” (Calsyn et al., 2005, p. 245; see also Morrissey, Meyer, & Cuddeback, 2007).

This call for alternative interventions is underscored by a large body of evidence indicating that the relationship between serious mental illness and criminal behavior is weak. For example, rigorous meta-analyses indicate that symptoms of psychosis (e.g., fixed false beliefs; hallucinations) do not significantly predict violence in offender populations (Douglas, Guy, & Hart, 2009), and that clinical factors (e.g., diagnosis, treatment) do not significantly predict either violent recidivism or general recidivism among offenders with serious mental illness (Bonta, Law, & Hanson, 1998). Similarly, there is little evidence that insufficient psychiatric treatment generally causes crime. For example, decreasing the availability of mental health services in a region does not increase incarceration rates for people with mental illness (Erickson, Rosenheck, Trestman, Ford, & Desai, 2008; Fisher, Packer, Simon, & Smith, 2000; Steadman, Monahan, Duffee, Hartstone, & Robbins, 1984).

Toward a Solution

Recognizing Heterogeneity Among Offenders

Recent research begins to provide direction for improving the policy response to offenders with mental illness. This research indicates that this population is heterogeneous. The direct cause model seems to fit a small but important subgroup – that is, a handful (perhaps 1 in 10) are arrested because their hallucinations or delusions lead to (seemingly irrational) violence or because they cause a public disturbance by being ‘psychotic at the wrong place at the wrong time.’ However, the rest (perhaps 9 in 10) have lifetime patterns of crime that are indistinguishable from those of general offenders.

Peterson, Skeem, Hart, Vidal, & Keith (2010) used interview- and record-based data to reliably classify the lifetime patterns of offending for parolees with mental illness (n=112), and compare them with those of a matched sample of parolees without mental illness (n=109). The modal diagnosis in the re-entry sample was schizophrenia or another psychotic disorder (52%). We found that the modal pattern of offending for parolees both with- (90%) and without- (68%) mental illness was “reactive,” reflecting hostility, emotional dysregulation, and impulsivity. Only 7% of parolees in this re-entry program manifested a pattern that was attributable to psychotic or other symptoms. This suggests that mental illness is a direct or leading cause of criminal behavior for only a minority of offenders with mental illness. Most have patterns of offending similar to those of non-ill offenders.

Remarkably similar findings have emerged in studies of less serious offenders and of psychiatric

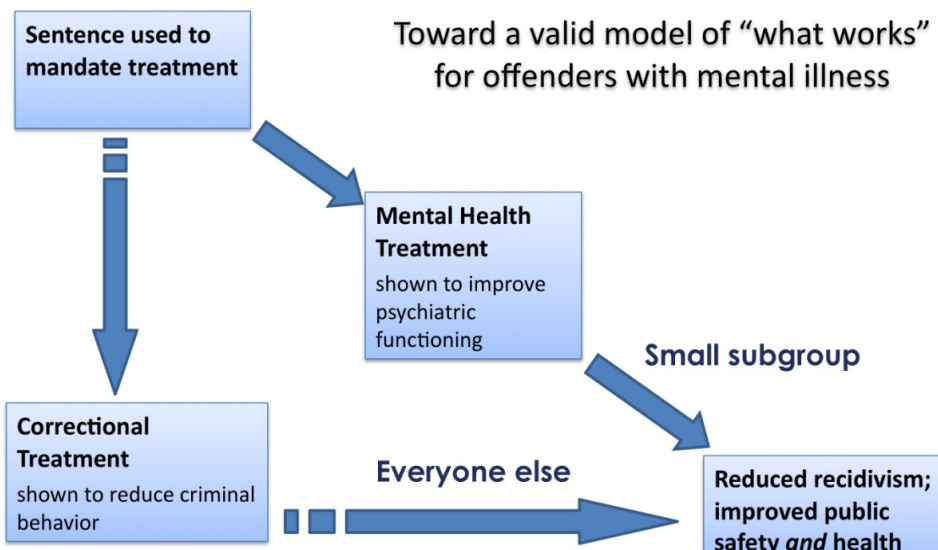
patients. Based on a sample of 113 inmates deemed eligible for a jail diversion program (34% of whom had a schizophrenia spectrum disorder), Junginger, Claypoole, Laygo, and Cristiani (2006) found that 8% had been booked for offenses that their psychiatric symptoms probably-to-definitely caused, either directly (4%; psychosis) or indirectly (4%; other symptoms like confusion, depression). Similarly, of over 608 violent incidents involving psychiatric patients, only 11% were rated as having occurred while patients were delusional or hallucinating (Monahan et al., 2001). As Junginger et al. (2006) concluded, “persons with serious mental illness may be overrepresented in jails and prisons, but we can offer little evidence...that it was their illness that got them there” (p. 881).

Toward Addressing Heterogeneity

There are two promising pathways for improving outcomes for offenders with mental illness (OMIs, Skeem et al., 2010). The first pathway involves better implementing the current direct cause model. It is possible that contemporary programs yield mixed results not because the model is flawed, but instead because programs vary in their fidelity to the model. To better reduce recidivism, we would ensure that offenders are linked with high quality mental health services that have been shown to reduce symptoms and improving functioning. This pathway has been, and continues to be, vigorously pursued (see Osher & Steadman, 2007).

The second pathway is far less traveled. This pathway involves expanding the direct cause model to recognize that for many offenders, the relationship between mental illness and criminal behavior is an *indirect* or even *independent* one. As an example of an *indirect* relationship, a mental illness like schizophrenia may expose individuals to disadvantaged neighborhoods and other social environments that encourage or tolerate criminal behavior – “settings that are rife with illicit substance, unemployment, crime, victimization, family breakdown...and a heavy concentration of other marginalized citizens” (Fisher & Drake, 2007, p. 546). Over time, some of these individuals develop the same powerful proximate risk factors for criminal behavior as those without schizophrenia, including adherence to antisocial attitudes and beliefs (see Skeem et al. 2010). Alternatively, if the relationship is *independent*, mental illness does not lead to these criminogenic risk factors at all. Instead, for example, schizophrenia may just happen to co-occur with an antisocial personality pattern that reflects causal factors that are quite independent of schizophrenia.

To reduce recidivism for offenders whose mental illness is indirectly related to, or independent of their criminal behavior, we should go beyond linkage with mental health services to incorporate evidence-based treatment practices that have been shown to reduce crime. The conceptual model behind the second pathway is shown below. The model retains linkage with mental health services for this population and recognizes that, for a small subgroup, this will be all that is needed to achieve better outcomes (as in the direct cause model). However, it adds linkage with treatment that has been shown to reduce recidivism.



Because the direct cause model does not fit most OMIs, it seems unlikely that we will reach the chief policy goal if we merely better implement mental health treatment programs that have

been shown to improve psychiatric symptoms and functioning. It is possible that adapting these programs to explicitly target recidivism will improve their ability to reach this goal (for mixed support of ACT adaptations, compare Cusack, Morrissey, Cuddeback, Prins, & Williams., 2010; Morrissey, Meyer, & Cuddeback, 2007). However, when programs based on the direct cause model are shown to be effective in “black box” studies, we tend to assume that the mechanism is symptom reduction. This may not be the case. For example, in a large outcome study, we found that the effect of specialty mental health probation in reducing arrests was mediated *not* by reduction in psychiatric or substance abuse symptoms, but instead by officers’ use of “core correctional practices” like establishing firm, fair, and caring relationships with offenders (Skeem & Manchak, 2010). Thus, this review provides evidence for pursuing a pathway that will more directly shed light on *how* to reduce recidivism risk for OMIs, while meeting their mental health needs. The evidence suggests that this pathway holds substantial promise for improving outcomes.

Criminogenic Risk Factors for Offenders with Mental Illness

The Forest: “Central Eight” as a Group

As suggested earlier, for most offenders with mental illness (OMIs), the strongest “criminogenic needs,” or risk factors for criminal behavior, are the same as those for offenders without mental illness. What are the strongest criminogenic needs? Several lists of these needs are available – they vary in number and nature, but overlap in many respects. For the purposes of this review, we adopt a simple model that captures the overlap among many lists and has substantial empirical support. According to this model, the “Big Four” risk factors for crime are an established criminal history, an antisocial personality pattern (stimulation seeking, low self control, hostility), antisocial cognition (attitudes, values, and thinking styles supportive of crime; e.g., misperceiving benign remarks as threats, demanding instant gratification), and antisocial associates. Four additional, moderate risk factors are substance abuse, employment instability, family problems, and low engagement in prosocial leisure pursuits. These “Central Eight” risk factors are assessed by a well-validated risk assessment tool called the Levels of Services Inventory/Case Management Inventory (LS/CMI; Andrews, Bonta, & Wormith, 2004).

Skeem, Nicholson and Kregg (2008) administered the LS/CMI to parolees with- and without- serious mental illness. We found that those with mental illness obtained substantially *higher* total scores on the LS/CMI than those without mental illness; in fact, scores on the LS/CMI were significantly correlated with a measure of psychiatric symptoms ($r = .33, p < .001$). LS/CMI scores predicted re-arrest during an average 18-month follow-up, regardless of mental health status. Virtually identical results were obtained in a study of 600 probationers with- and without- mental illness (Girard & Wormith, 2004). These findings are consistent with the view that “the predictive validity of mental disorders most likely reflects antisocial cognition, antisocial personality pattern, and substance abuse” (Andrews, Bonta, & Wormith, 2006, p. 10).

In short, two studies provide fairly compelling evidence that offenders with mental illness possess more general risk factors for recidivism than their relatively healthy counterparts. Having reviewed evidence on these risk factors as a group, we now review each separately, with particular emphasis on the “Big Four,” robust risk factors for criminal recidivism.

The Trees: Big 4

Of the “Central Eight,” the most robust risk factors directly reference criminal and other antisocial behavior, attitudes, thinking styles, and associates. In the LS/CMI study described earlier (Skeem, et al., 2008), parolees with mental illness scored as high (criminal history, criminogenic companions) or higher

(antisocial pattern, procriminal attitudes) than those without mental illness across the “Big Four” risk factors. Additional evidence is reviewed below by factor.

Established History of Criminal Behavior

The best predictor of future behavior is past, like behavior. For that reason, it is not surprising that a history of criminal behavior (particularly chronic, frequent, and with early onset) is one of the most robust predictors of criminal recidivism (Campbell, French, & Gendreau, 2009; Cottle, Lee, & Heilbrun, 2001; Gendreau, Little, & Goggin, 1996; Mulder, Brand, Bullens, & Marle, 2011). This is true whether one is an offender with mental illness or not (Bonta et al., 1998).

Offenders with mental illness engage have criminal histories that appear as long and varied, on average, as those of offenders without mental illness. For example, Skeem, et al. (2008) compared a demographically matched sample of parolees with- (n=112), and without (n=109) mental illness. There were no significant differences between the two groups in their average age of first offense (17 years), modal number of lifetime arrests (3 or more) and modal type of “most serious charge ever” (a person offense, rather than a property, drug or minor offense). Similarly, based on a cohort of over 40,000 inmates released from state prison, Eno Louden and Skeem (2011) found no significant differences between those with- and without- mental illness in their number of prior charges (violent charges, serious charges, or “any” charges). Similar results have been observed in the few other studies that have compared offenders with- and without- mental illness in their criminal histories (Porporino & Motiuk, 1995). For example, a study comparing offense histories of offenders with mental disorder (N=269) and without mental disorder (N=375) in an urban jail found no differences in offense and criminal history variable between groups, except that offenders with mental disorder were more likely to have a history of violence (Ashford, 1989). Having a criminal history is common among people with mental illness and has been shown to be an important risk factor for criminal behavior (i.e. Frank, 2008; Phillips, Gray, MacCulloch, Taylor, Moore, Huckle, & MucCulloch, 2005; White, Chafez, Collins-Bride, & Nickens, 2006). These findings strongly challenge intuitive notions that offenders with mental illness generally commit relatively minor or isolated offenses.

One area of “criminal behavior” in which offenders with mental illness clearly are disproportionately represented is failure of conditional release. When they are on probation or parole, offenders with mental illness are more than twice as likely as their counterparts to have their term of community supervision revoked and return to incarceration (see Porporino & Motiuk, 1995). Although some of these revocations are for a new offense (Grattet, Petersilia, & Lin, 2008), many are for technical violations of the conditions of supervision (e.g., failing to attend treatment; Eno Louden & Skeem, 2011). This suggests that supervision officers and judges have relatively low tolerance for minor violations committed by those with mental illness (see Eno Louden & Skeem, 2011; Skeem, Manchak & Peterson, 2010).

Antisocial Personality Pattern

An antisocial personality pattern describes a person who is adventurous, pleasure seeking, aggressive, and has weak self-control (Andrews, Bonta, & Wormith, 2006). Clinicians often have strong adverse and avoidant reactions to the word, “antisocial.” However, a growing body of evidence reveals as untenable the field’s dichotomization of offenders with mental illness into two groups-- those who are “mad” and therefore treatable (because they have serious mental illness or psychosis) and those who are “bad” and therefore untreatable (because they have problematic personality traits or disorders). First, antisocial traits clearly are treatable risk factors for crime. Many evidence-based correctional programs explicitly address these traits by building skills for problem solving, anger management, and impulse control

(Andrews et al., 2006). Second, as shown in this section, individuals with serious mental illness who engage in violent and other criminal behavior very often have problematic personality traits. To improve outcomes for this group, these traits must be acknowledged and targeted in treatment efforts.

Problematic personality traits are one of the most powerful predictors of violent and other criminal behavior for those with serious mental illness (Bonta, Law, & Hanson, 1998; Skeem, Miller, Mulvey, Monahan, & Tiemann, 2005). For example, in the landmark “MacArthur Violence Risk Assessment Study,” over 1,000 psychiatric patients were followed intensively after hospital discharge to test over 130 promising risk factors for violence. The strongest predictor of violence in that study, by far, was a measure that captured antisocial personality traits and behavior – not symptoms like delusions or hallucinations (Monahan et al., 2001). Specifically, this measure captured past impulsive, irresponsible, antisocial behavior (Skeem & Mulvey, 2001). Its predictive utility for violence largely reflected traits of antagonism (e.g., suspiciousness, combativeness, deceptiveness, lack of empathy, arrogance; Skeem, et al., 2005).

An antisocial personality pattern evokes the more formal clinical concept of “Antisocial Personality Disorder” (ASPD), which includes irritability and aggressiveness, impulsivity, irresponsibility, deceitfulness, and chronic criminal behavior with a relatively early onset (American Psychiatric Association, 2000). ASPD is relatively prevalent among offenders with serious mental illness. For example, Hodgins, Toupin, and Cote (1996) found that 63% of incarcerated offenders with schizophrenia met the criteria for ASPD. On the other side of the coin, serious mental illness is relatively prevalent among those with ASPD. Results of the Epidemiologic Catchment Area survey indicate that those with ASPD are over 7 times more likely to meet criteria for schizophrenia than those without ASPD (Robins & Price, 1991; Robins 1993).

Antisocial traits can powerfully drive criminal behavior for many offenders with mental illness. As noted earlier, Peterson et al. (2010) intensively compared lifetime patterns of criminal behavior for parolees with- and without- mental illness. Parolees were classified into five categories based on a detailed review of their criminal history: psychotic, survival, reactive, instrumental, or gang and/or drug-related. The reactive group held the majority of offenders with (90%), and without (68%) mental illness. Most parolees, whether or not they had a mental illness, had criminal histories characterized by an antisocial personality pattern including hostility, emotional dysregulation, and impulsivity.

Antisocial Cognition

Antisocial cognition is strongly associated an antisocial personality pattern (Walters et al., 2002), and is the direct target of several well-validated CBT programs that reduce criminal recidivism (see above; Ross, Fabiano, & Ewles, 1988; Little & Robinson, 1998; Bush, Glick, & Taymans, 1997). Andrews, Bonta, and Wormith (2006) define antisocial cognition as, “attitudes, values, beliefs, and rationalizations supportive of crime; cognitive emotional states of anger, resentment and defiance” (p. 11). Examples of specific beliefs in this domain are those that support demands for instant gratification, feelings of entitlement to special treatment or goods, or misperception of benign remarks as threats.

Antisocial cognition is as prevalent or more prevalent among offenders with mental illness as offenders without mental illness. A study by Morgan, Fisher, Duan, Mandracchia, and Murray (2010) recently examined the presence of criminal thinking among incarcerated offenders with mental illness (265 men and 149 women) using two self report scales: the Psychological Inventory of Criminal Thinking Scale (PICTS) and Criminal Sentiments Scale. Their results showed that 66% of offenders with mental illness in the study endorsed a criminal belief system reflecting antisocial cognition. Although this study did not

include a control group of offenders without mental illness, the sample's scores on each PICTS subscale equaled or exceeded the scores of offenders without mental illness from normative samples.

An additional study (under review) examined criminal thinking and antisocial cognition among 4,204 inmates (3,986 men, 218 women) nearing their release date. Unfortunately, this study suffers from method bias, as inmates self-reported both their mental illness status (via one flawed self report item) and their criminal attitudes (via the Criminal Sentiments Scale). Nearly 20% and 7% of men and 46% and 19% of women reported having a mental illness or serious mental illness, respectively. Male and female offenders with mental illness reported similar levels of criminal thinking as offenders without mental illness. Moreover, men with serious mental disorders reported significantly higher levels of criminal attitudes than offenders without mental disorders, or with less serious mental disorders.

Antisocial Associates

One risk factor for criminal behavior is an absence of strong bonds with people who engage in prosocial behavior (Carr & Vandiver, 2001; Goldner, Peters, Richards, & Pearce, 2010; Kosterman, Hawkins, Abbot, Hill, Herrenkohl, & Catalano, 2005). In general, individuals who belong to stigmatized groups tend to have small social networks (Carter & Feld, 2004). Social networks for individuals with mental illness have been found to consist of approximately 12 people (average) and 4 people (modal) (Estroff & Zimmer, 1994; MacDonald, Luxmoore, Pica, Tanti, Blackman, Catford, & Stockton, 2004). It may be that individuals with mental illness avoid social interactions because they are often ignored or poorly treated, or because they expect to be rejected by others (Link, 1987). These small social networks leave individuals with mental illness more isolated from positive social influence.

Beyond an absence of prosocial bonds, and even stronger risk factor for criminal behavior is spending significant time with family or friends who engage in criminal behavior (Agnew & Brezina, 1997; Beaver, Shutt, Boutwell, Ratchford, Roberts, & Barnes, 2008; Mulder, Brand, Bullens, & Van Marle, 2011; Murray & Farrington, 2010). These associations provide both modeling of- and opportunity for- criminal activity. Skeem, Eno Loudon, Manchak, Vidal, and Haddad (2009) assessed the size and nature of social networks for 82 probationers with mental health and substance use problems. They found that these offenders with mental illness had exceptionally small social networks; the modal number of persons in their network was only four. In addition, their networks were mostly comprised of professionals (e.g., treatment providers, probation officers) and friends and family members who engaged in risky behavior. When examining their core network, or the most important people in their lives, probationers reported that 41% of these important people had been previously arrested, 33% regularly used drugs, and 29% drank a lot, highlighting the presence of antisocial associates in the lives of offenders with mental illness.

The Saplings: Moderate Four

The other four risk criminal factors that make up the "Central Eight" are more modestly associated with recidivism than the Big Four. The Moderate Four include substance abuse problems, employment instability, low engagement in prosocial leisure pursuits, and family and marital problems. In the LS/CMI study described earlier (Skeem, et al., 2008), parolees with mental illness scored as high (substance abuse problems, low engagement in prosocial leisure pursuits) or higher (employment instability; family and marital problems) than those without mental illness across these risk factors. In part, those with mental illness may suffer greater

Substance Abuse Problems

Substance abuse can be a criminal offense. For this reason and others, substance abuse problems are quite prevalent in the criminal justice population. Moreover, people with mental illness are more prone

to substance abuse disorders than people without mental illness (Kessler et al., 1996; Mueser, Bennett, & Kushner, 1995; Regier et al., 1990). Given these two factors, it should not be surprising that the vast majority (up to 75%) of offenders with mental illness have a co-occurring substance abuse problem (see Draper & Prins, 2009). In one study of 627 probationers, offenders with mental disorder are twice as likely to suffer from a co-occurring substance dependence disorder than those without mental disorder (Lurigio, Cho, Swartz, Johnson, Graf, & Pickup 2003).

For a subset of individuals with co-occurring problems, substance abuse raises the likelihood of involvement in violent and other criminal behavior. The MacArthur Violence Risk Assessment Study (Steadman, et al., 1998) has addressed the first issue most comprehensively. In this study, over 1,000 patients with mental disorder were followed in the community for one year after psychiatric hospital discharge to assess their involvement in violence (based on patients' reports, collateral informants' reports, and record reviews). The one-year prevalence of violence among patients with a co-occurring substance abuse disorder (31-43%) was 1.7 - 2.4 times higher than that of patients without a co-occurring disorder (18%). Moreover, the ten-week prevalence rate of violence among patients with mental disorder was not significantly different than that of a comparison sample of over 500 people living in the same neighborhoods, provided that neither group had a substance abuse problem. Substance abuse problems raised the risk of violence for both groups, but raised patients' rates of violence during that 10-week period (22%) substantially more than that of their neighbors (11%).

For a significant minority of offenders with mental illness, substance abuse is also directly linked with criminal behavior that extends beyond violence. Based on a sample of 113 arrestees with serious mental illness and co-occurring substance abuse disorders, Junginger et al (2006) found that 19% were intoxicated or high at the time they were arrested (a "direct effect" of substance abuse) and another 8% were arrested for an offense that was "indirectly" related to substance abuse (e.g., robbing someone for money to support a habit). Thus, for this sample of offenders with co-occurring mental and substance abuse problems, about 1 in 4 committed an offense that was "probably to definitely" related to substance abuse issues. For information about substance abuse, please see Faye Taxman's complete review.

Employment Instability

Poor engagement in educational and employment pursuits, which generally are prosocial activities, is a risk factor for criminal behavior. Having a serious mental illness is strongly linked with relatively low educational levels and under- or un-employment (for a review, see Draine, Salzer, Culhane, & Hadley, 2002). For example, in a study of over 500 patients with schizophrenia, Mueser, Salyers & Mueser (2001) found that only 10-21% of participants were competitively employed during a two-year observation period.

Employment problems often are precipitated by poor educational attainment. Only 5% of people with schizophrenia are college graduates, compared to over 15% of the population in general (Kessler, Foster, Saunders, & Stang, 1995). Poor educational attainment, in turn, often means that people are eligible only for low paying or short-term positions. In a study of nearly 300 people with varying mental illnesses, McCrohan, Mowbray, Bybbee, & Harris (1994) found that 51% reported their last job was in the service industry, and 31% reported benchwork jobs.

These findings seem to generalize to offender populations. In the study described above on parolees who had been recently released from prison (Skeem, et al., 2008), those with mental illness were significantly less likely to graduate from high school and were substantially more likely to be unemployed (85%) than those without mental illness (66%). Prins and Draper (2009) reported similar

findings in their review, where un-cited studies indicated that offenders with mental illness were more likely to be unemployed (44% vs. 24%), receive welfare (26% vs. 16%) and be homeless (30% vs. 17%) than those without mental illness.

These findings may reflect the fact that mental illness involves poor social skills, cognitive impairments, stress reactivity, and other factors that directly impair one's ability to secure and perform well in a job. Alternatively, poverty may often moderate the relationship between mental illness and social problems like joblessness and homelessness (see Draine et al., 2002). Social disadvantage can make it difficult to perform well in school and attain a stable work history. Whether the relationship is direct or indirect, however, it is clear that those with mental illness are likely to have an unstable pattern of employment, which is a risk factor for crime.

Low Engagement in Prosocial Leisure Pursuits

As shown above, offenders with serious mental illness are likely to be unemployed and tend to have limited prosocial social networks and activities. This translates to more idle time with little to do. Colloquially, "idle hands do the devil's work." Empirically, unstructured routine activities are a risk factor for involvement in criminal activity (e.g., Cross, Gottfredson et al., 2010; Osgood, Wilson, O'Malley, & Bachman, 1996; Pollack, Joo, & Lawton, 2010; Rice & Smith, 2002; for classic "routine activities" theory, see Cohen & Felson, 1979). Unstructured social time creates criminal opportunities which are particularly associated with offending among adolescents (Anderson & Hughes, 2009; Goldner, Peters, Richards, & Pearce, 2011; Svensson & Oberwittler, 2010).

To our knowledge, no studies have directly compared offenders with- and without- mental illness in their daily or routine activities. However, the LSI-R includes a two-item subscale that assesses a lack of involvement in organized prosocial activities (at home, school, work, church, etc.) and poor management of "down" time. As shown earlier, Skeem et al. (2008) found that offenders with mental illness scored as high as those without mental illness on this admittedly limited scale.

There is also evidence that serious mental illness is linked to less structured activity. In a study of 389 Swedish outpatients with serious mental illness, Leufstadius and Eklund (2008) found that 15% spent at least 10 hours per week in community treatment, 29% spent at least 10 hours per week studying or working, and 57% had no regular or structured activities that consumed at least 10 hours per week. Based on a stratified sample of 35 patients drawn from each of these three groups, the authors found that patients with greater symptom distress were significantly less likely to spend time in productive activity (work/education, constructive play/leisure, self-care) and more time resting or sleeping.

Family and Marital Problems

Problems with family and romantic partners are a weak, but relatively robust risk factor for criminal behavior in both adults (for a review, see Derszon, 2010) and adolescents (for a review, see Leschied, Chiodo, Nowicki, & Rodger, 2008). Family members are often primarily responsible for providing housing, financial support, and emotional support for people at risk for criminal behavior (Naser & La Vigne, 2006). In addition, romantic partnerships can either encourage prosocial or antisocial behavior. For example, a study of at-risk men over a 12-year period found that women's antisocial behavior predicted both the onset and persistence of arrests for their male partners, while relationship stability protected against new arrests (Capaldi, Kim, & Owen, 2008).

The LSI-R includes a four-item subscale that assesses satisfaction with, and/or criminal behavior among, romantic partners, parents, and non-parental adult figures. As shown earlier, Skeem, et al. (2008) found that offenders with mental illness had significantly greater risk in this domain than offenders without

mental illness. Similarly, as shown above, Skeem, Eno Louden et al. (2009) found that core social network members for offenders with mental illness often abused substances regularly and/or had a history of arrest.

Limited data that are relevant can be found in other domains. First, a wealth of data indicates that people with serious mental illness tend to have fewer and more problematic romantic relationships than those without such illness (APA, 2000; Forthofer, Kessler, Story, & Gotlib, 1996; Hulson, 1992; Teitler & Reichman, 2008). Second, when people with- or without- mental illness are involved in violent incidents, the most likely co-combatant is a family member or friend (Steadman et al., 1998). However, the violent incidents of women with mental illness are particularly likely to involve family members and occur in the home (Robbins, Monahan, & Silver, 2003).

Implications

Risk Assessment

Together, this research suggests that offenders with mental illness should be systematically assessed not only for psychiatric problems, but also for criminogenic risk. A risk assessment tool that is well-validated for this purpose is the LSI-R and LS/CMI, which assess the “Central Eight” risk factors reviewed here and have been shown to predict recidivism, whether one is mentally ill or not. The LSI-R is a well-known 54-item assessment instrument used to identify the risks and needs of offenders along the following scales: criminal history, education, employment and financial, family and marital, accommodation, leisure and recreation, companions, alcohol and drug problems, emotional and personal, and attitude and orientation (Andrews & Bonta, 1995). It is correlated with criminal thinking and past criminal behavior (Walters & Schlauch, 2008), and is predictive of recidivism for both male and female offenders (Vose, Lowenkamp, Smith, & Cullen, 2009), and offenders with and without mental disorder (Ferguson, Ogloff, & Thomson, 2009). The Level of Service/Case Management Inventory (LS/CMI) combines the 54 items of the LSI-R into 43 items and adds a case management system. It is predictive of both general and violent recidivism among male and female forensic populations (Girard & Wormith, 2004; Rettinger & Andrews, 2010; Skeem, Nicholson et al., 2011), as well as adolescents (Youth Level of Service/Case Management Inventory; Schmidt, Hoge, & Gomes, 2005).

Other tools may also be appropriate, depending upon one’s purpose. These include well-validated violence risk assessment scales for offenders with mental illness (Webster et al., 1997) and specific self-report measures of criminal thinking (see Morgan, Fisher, & Wolff, 2010). Whatever tool is selected, it is crucial to ensure that they have been assessed by an entity with no financial interest in the tool for interrater reliability, construct validity, and predictive utility for offenders with mental illness. A wide variety of “risk/needs” tools are currently on the market, and many are highly complex and/or poorly validated, particularly for this population (see Skeem & Eno Louden, 2007).

A more streamlined approach would involve assessing antisocial cognition, given that evidence-based correctional programs that target this “Big Four” risk factor are available for implementation and may go far in reducing risk for this population. Measures available for this purpose include the PICTS and CSS (see above). The Psychological Inventory of Criminal Thinking Styles (PICTS, Walters, 1995) is an 80-item self-report questionnaire that is designed to measure 8 criminal thinking styles: mollification, cutoff, entitlement, power orientation, sentimentality, super-optimism, cognitive indolence, and discontinuity. It is correlated with past criminal behavior (Walters, 2002), and is predictive of both institutional adjustment (Walters, 2010) and recidivism among offenders (Walters, 2009), as well as illegal behavior among college students (McCoy, Fremouw, Tyner, Clegg, Johanson-Love, & Strunk, 2006). As shown earlier, both the PICTS and CSS have been used in studies with offenders with mental illness to reveal

substantial criminal thinking in this population as a whole. Free measures of criminal thinking that have some evidence of validation for general offenders (though not offenders with mental illness) are also available at: <http://www.ibr.tcu.edu/evidence/TCU-CTS-AFS.pdf>

Treatment

The fact that criminogenic needs are so common among offenders with mental illness makes it unlikely that treatments that narrowly target mental health symptoms will be effective at reducing recidivism for this population. At present, criminogenic needs seem to take a distinct back seat to psychiatric symptoms as treatment targets for this population. In an examination of 83 audio-taped meetings between specialty mental health probation offenders and their supervisees, Eno Loudon, Skeem, Camp, Vidal, & Peterson (2010) found that officers were much more likely to discuss the probationer's general mental health and treatment needs than criminal attitudes and other major risk factors for recidivism.

One goal of the current review is to encourage expansion of the direct cause model to recognize that we must (a) target high risk offenders for intensive supervision and treatment, and (b) add well-validated treatment principles and programs that explicitly are designed to reduce criminal behavior, if we are to improve outcomes for OMI. First, with respect to high risk offenders, clinicians often have intense negative reactions to the word "antisocial" (see above, "Antisocial Personality Pattern"). The tendency to exclude such clients from treatment is based less on scientific evidence than a preference to work with potentially more pleasant and compliant lower risk clients (see Skeem, Polascheck et al., 2009). On one hand, research suggests that high-risk offenders can be challenging to treat. The very features that predispose them to criminal behavior (e.g., anger, egocentricity, noncompliance, poor problem solving skills) – and therefore need to change -- also challenge the process of treatment. On the other hand, however, research indicates that high risk offenders can be effectively treated (see below). Thus, we believe clinicians should use challenges to the treatment process not to indicate who will benefit least from treatment, but instead to identify clients they should work hardest to help.

Second, with respect to leveraging evidence-based corrections, mental health services are necessary for OMI and clinicians may prefer to offer such services, given their training backgrounds. However, mental health services will only be sufficient to reduce recidivism for a small subgroup. For broader impact, two forms of correctional programs and principles should be added to the existing policy model. First, a cognitive-behavioral treatment (CBT) program should be added. CBT programs explicitly address the strongest risk factors for recidivism, which offenders with serious mental illness share with their relatively healthy counterparts. CBT programs are designed to reduce antisocial beliefs and attitudes and to provide opportunities for acquiring and practicing pro-social skills for interpersonal interaction, self-management, and problem-solving. CBT programs are structured, applicable in groups, and achieve the largest and most consistent effect sizes in reducing criminal recidivism (Lipsey, Chapman, & Landenberger, 2001; Pearson, Lipton, Cleland, and Yee, 2002; Wilson, Bouffard, & MacKenzie, 2005). Indeed, "reviews of the comparative effectiveness of different treatment approaches have generally ranked it in the top tier with regard to effects on recidivism" (Lipsey & Landenberger, 2006, p. 57). A variety of specific brands of CBT are available, including Reasoning & Rehabilitation, Moral Reconciliation Therapy, and Thinking for a Change. However, all appear equally effective in reducing recidivism (Aos et al., 2006; Landenberger & Lipsey, 2005). "It thus appears to be the general CBT approach, and not any specific version, that is responsible for the overall positive effects" (Lipsey & Landenberger, 2006, p. 69).

Second, the treatment principles of "risk-need-responsivity" (RNR; Andrews, in press) should be added. Research indicates that offenders are less likely to recidivate when programs match the intensity of treatment to their level of risk for recidivism (Risk principle), target their criminogenic needs (Need principle), and match modes of treatment to their abilities and styles (Responsivity principle; see

Andrews, in press; Lowenkamp et al., 2006a, 2006b). If they are applied to high risk offenders, CBT programs go far in embodying RNR, since they (a) target needs closely related to criminality, and (b) are delivered in structured formats that are generally responsive to the learning styles of offenders.

Despite the promise of CBT programs and RNR principles for OMIs, they rarely have been applied to this group. Still, the little evidence available is positive. First, re-entry programs with a focus on “criminal thinking” seem to reduce recidivism for this population. Sacks, Sacks, McKendrick, Banks, and Stommel (2004) randomly assigned 134 inmates with mental illness to participate in either a prison-based psychiatric treatment program or CBT program that also targeted criminal thinking and substance abuse. After release to the community, some participants in the CBT program (45 of 75) continued in a six-month residential version of the CBT program. During the year after release, rates of return to prison were highest in the psychiatric treatment group (33%), followed by the CBT prison-only group (16%) and the CBT prison & community group (5%). Second, a CBT program that has been modified to accommodate the cognitive limitations of some OMIs (Young & Ross, 2007) has decreased criminal thinking in three small controlled studies (treatment $n < 15$) conducted on inpatient forensic psychiatric units in Europe (Antonowicz, 2005). In a fourth study, Young, Chick, and Gudjonsson (2010) compared 22 OMIs who completed this CBT program (out of 34 who began it) with 12 wait-list controls. Those in the CBT group showed greater reductions in both antisocial attitudes and disruptive behavior on the unit than those in the control group. Notably, CBT was delivered in inpatient or residential settings in all of these studies. Effects are likely to be even larger when CBT is delivered in the parole outpatient context, given robust evidence that its effects are more powerful when delivered in the community rather than prison (Lipsey & Landenberger, 2006).

Although we have emphasized the promise of adding CBT and RNR, it is important to underscore that mental health services are an essential element of the expanded policy model. First, mental illness is a criminogenic need for a small but important minority of OMIs. Second, even when mental health services have little effect on recidivism, they can achieve crucial public health outcomes for OMIs (e.g., reducing symptoms and hospitalization). Third, providing mental health services may help embody the principle of specific responsivity, i.e., building on the strengths of the case and reducing barriers to full participation in supervision and services. It is important to acknowledge that specific responsivity is the least well-validated principle included in the “Risk-Needs-Responsivity” model, and is often “misused as a way to keep doing what has always been done. For example, a focus on relieving mental illness...may be treated as even more important than adherence with the core RNR principles” (Andrews, in press, p. 139), including a primary focus on criminogenic needs. As yet, there is no compelling empirical evidence that mental health services fulfill the specific need principle for OMIs. Nevertheless, an absence of evidence for this principle is not the same as evidence against the principle. Moreover, logic dictates that for some OMIs, mental health services will act synergistically with empirically-validated treatments for reducing recidivism like CBT. Specifically, mental health services may reduce hallucinations or cognitive disorganization that will interfere with some acutely ill offenders’ ability to benefit from CBT sessions that target criminal thinking. In short, there are three compelling reasons to retain mental health services in the expanded policy model that focuses more directly on improving criminal justice outcomes for OMIs.

References

- Abram, K., & Teplin, L. (1991). Co-occurring disorders among mentally ill jail detainees: Implications for public policy. *American Psychologist*, *46*, 1036–1045.
- Abram, K., Teplin, L., & McClelland, G. (2003). Co-morbidity of severe psychiatric disorders and substance use disorders among women in jail. *American Journal of Psychiatry*, *150*, 1007-1010.
- Agnew, R., & Brezina, T. (1997). Relational problems with peers, gender, and delinquency. *Youth Society*, *29*, 84-111.
- American Probation and Parole Association (APPA). (2003). *Resolution: Justice system's response to individuals with mental illness*. Retrieved February 3, 2009 from [http://www.appa-net.org/eweb/DynamicPage.aspx?Site=APPA_2&WebCode=IB Resolutions](http://www.appa-net.org/eweb/DynamicPage.aspx?Site=APPA_2&WebCode=IB%20Resolutions).
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington DC: Author.
- Anderson, A.L., & Hughes, L.A. (2009). Exposure to situations conducive to delinquent behavior: The effects of time use, income, and transportation. *Journal of Research in Crime and Delinquency*, *46*, 5-34.
- Andrews, D. (in press). The Risk-Need-Responsivity (RNR) model of correctional assessment and treatment. In J. Dvoskin, J. Skeem, R. Novaco, & K. Douglas (Eds.), *Applying social science to reduce violent offending*. Oxford: Oxford Press.
- Andrews, D. and Bonta, J. (1995) *The Level of Service Inventory - Revised manual*. Toronto: Multi-Health Systems.
- Andrews, D. , Bonta, J. and Wormith, J. S. (2004) *Level of Service/Case Management Inventory (LS/CMI): An offender assessment system. User's manual*. Toronto: Multi-Health Systems.
- Andrews, D., Bonta, J., & Wormith, S. (2006). The recent past and near future of risk and/or need assessment. *Crime and Delinquency*, *52*, 7-27.
- Anthony, W. A., Rogers, E. S., Cohen, M., & Davies, R. (1995). Relationships between psychiatric symptomatology, work skills, and future vocational performance. *Psychiatric Services*, *46*, 353–358.
- Antonowicz, D. (2005). The Reasoning and Rehabilitation program: Outcome evaluations with offenders. In M. McMurrin & J. McGuire (Eds), *Social problem-solving and offending: Evidence, evaluation, and evolution* (163-181). Chichester: Wiley.
- Aos, S. (2010). Return on (taxpayer) investment: *Evidence-based options to improve statewide outcomes-update for the legislature*. Olympia, WA : Washington State Institute for Public Policy.

- Aos, S., Miller, M., & Drake, E. (2006). *Evidence-based adult corrections programs: What works and what does not*. Olympia, WA: Washington State Institute for Public Policy.
- Ashford, S.B. (1989). Offense comparisons between mentally disordered and non-mentally disordered inmates. *Canadian Journal of Criminology*, *31*, 35-48.
- Baillargeon, J., Binswanger, I., Penn, J., Williams, B., & Murray, O. (2009). Psychiatric disorders and repeat incarcerations: The revolving prison door. *The American Journal of Psychiatry*, *66*, 103-109.
- Beaver, K.M., Shutt, J.E., Boutwell, B.B., Ratchford, M., Roberts, K., & Barnes, J.C. (2008). Genetic and environmental influences on levels of self-control and delinquent peer affiliation: Results from a longitudinal sample of adolescent twins. *Criminal Justice and Behavior*, *36*, 41-60.
- Blitz, C., Wolff, N., & Shi, J. (2008). Physical victimization in prison: The role of mental illness. *International Journal of Law and Psychiatry*, *31*, 385-393.
- Bonta, J., Law, M., & Hanson, C. (1998). The prediction of criminal and violent recidivism among mentally disordered offenders: A meta-analysis. *Psychological Bulletin*, *123*, 123-142.
- Bureau of Justice Assistance. (2009). *Improving responses to people with mental illness: The essentials of a mental health court*. Retrieved on February 3, 2009 from <http://www.ojp.usdoj.gov/BJA/grant/mentalhealth.html>.
- Bureau of Justice Statistics. (2009). *Adult correctional populations, 1980-2007*. Retrieved on February 17, 2009 from <http://www.ojp.usdoj.gov/bjs/glance/corr2.html>.
- Bush, J., Glick, B., & Taymans, J. (1997, revised 1998). *Thinking for a Change: Integrated cognitive behavior change program*. Washington District of Columbia: National Institute of Corrections, U.S. Department of Justice.
- Calsyn, R.J., Yonker, R.D., Lemmin, M.R., Morse, G.A., & Klinkenberg, W.D. (2005). Impact of assertive community treatment and client characteristics on criminal justice outcomes in dual disorder homeless individuals. *Criminal Behaviour and Mental Health*, *15*, 236-248.
- Campbell, M.A., French, S., & Gendreau, P. (2009). The prediction of violence in adult offenders: A meta-analytic comparison of instruments and methods of assessment. *Criminal Justice and Behavior*, *36*, 567-590.
- Capaldi, D.M., Kim, H.K., & Owen, L.D. (2008). Romantic partners' influence on men's likelihood of arrest in early adulthood. *Criminology: An Interdisciplinary Journal*, *46*, 267-299.
- Carr, M.B., & Vandiver, T.A. (2001). Risk and protective factors among youth offenders. *Adolescence*, *36*, 409-426.
- Carter, W. C., & Feld, S. L. (2004). Principles relating social regard to size and density of personal networks, with applications to stigma. *Social Networks*, *26*, 323-329.

- Chandler, D., & Spicer, G. (2006). Integrated treatment for jail recidivists with co-occurring psychiatric and substance use disorders. *Community Mental Health Journal, 42*, 405-425.
- Clark, R., Ricketts, S., & McHugo, G. (1999). Legal system involvement and costs for persons in treatment for severe mental illness and substance use disorders. *Psychiatric Services, 50*, 641-647.
- Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: a routine activity approach. *American Sociological Review, 44*, 488-608.
- Comparative analysis of thinking styles and emotional states of male and female inmates with and without mental disorders (under review). *Psychiatric Services*.
- Cottle, C.C., Lee, R.J., & Heilbrun, K. (2001). The prediction of criminal recidivism in juveniles. *Criminal Justice and Behavior, 28*, 367-394.
- Council of State Governments. (2002). *Report of the Criminal Justice/Mental Health Consensus Project*. New York: Council of State Governments. Retrieved on March 13, 2008 from <http://www.consensusproject.org>.
- Cross, A. B., Gottfredson, D. C., Wilson, D. M., Rorie, M., & Connell, N. (2010) Implementation quality and positive experiences in after-school programs. *American Journal of Community Psychology, 45*, 370-380.
- Cusack, K., Morrissey, J., Cuddeback, G., Prins, A., & Williams, D. (2010). Criminal justice involvement, behavioral health service use, and costs of forensic assertive community treatment: A randomized trial. *Community Mental Health Journal, 46*, 356-63.
- Derzon, J.H., (2010). The correspondence of family features with problem, aggressive, criminal, and violent behavior: A meta-analysis. *Journal of Experimental Criminology, 63*, 263-292.
- Douglas, K. S., Guy, L. S., & Hart, S. D. (2009). Psychosis as a risk factor for violence to others: A metaanalysis. *Psychological Bulletin, 135*, 679-706.
- Draine, J., Salzer, M., S., Culhane, D.P., & Hadley, T.R. (2002). Role of social disadvantage in crime, joblessness, and homelessness among persons with serious mental illness. *Psychiatric Services, 53*, 565-573.
- Draine, J., Wilson, A.B., & Pogorzelski, W. (2007) Limitations and potential in current research on services for people with mental illness in the criminal justice system. *Journal of Offender Rehabilitation, 45*, 159-177.
- Eno Louden, J. & Skeem, J. (2011). Parolees with mental disorder: Toward evidence- based practice. *Bulletin of the Center for Evidence-Based Corrections*.
- Eno Louden, J., Skeem, J., Camp, J., Vidal, S., & Peterson, J. (2010). Supervision practices in specialty mental health probation: What happens in officer-probationer meetings? *Law and Human Behavior*, online first.

- Erickson, S., Rosenheck, R., Trestman, R., Ford, J., & Desai, R. (2008). Risk of incarceration between cohorts of veterans with and without mental illness discharged from inpatient units. *Psychiatric Services, 59*, 178-183.
- Estroff, S., & Zimmer, C. (1994). Social networks, social support, and violence among persons with severe, persistent mental illness. In J. Monahan & H. Steadman (Eds.), *Violence and mental disorder: Developments in risk assessment* (pp. 259–295). Chicago: University of Chicago Press.
- Fazel, S., & Danesh, J. (2002). Serious mental disorder in 23,000 prisoners: A systematic review of 62 surveys. *Lancet, 359*, 545-550.
- Ferguson, A.M., Ogloff, J.R., & Thompson, L. (2009). Predicting recidivism by mentally disordered offenders using the LSI-R: SV. *Criminal Justice and Behavior, 36*, 5-20
- Fisher, W., & Drake, R. (2007). Forensic mental illness and other policy misadventures: Commentary on “Extending assertive community treatment to criminal justice settings: Origins, current evidence, and future directions.” *Community Mental Health Journal, 43*, 545-548.
- Fisher, W., Packer, I., Simon, L., & Smith, D. (2000). Community mental health services and the prevalence of severe mental illness in local jails: Are they related? *Administration and Policy in Mental Health, 27*, 371-382.
- Forthofer, M., Kessler, R.C., Story, A., & Gotlib, I.H. (1996). The effects of psychiatric disorders on the probability and timing of first marriage. *Journal of Health and Social Behavior, 27*, 121-132.
- Frank, S. (2008). Correlates of crime and violence among persons with mental disorder: An evidence-based review. *Brief Treatment and Crisis Intervention, 8*, 171-194.
- GAINS Center--Rotter, M., & Carr, A. (2010). *Targeting criminal recidivism in justice-involved people with mental illness: Structured clinical approaches*. Washington, D.C.: The Substance Abuse and Mental Health Services Administration (SAMHSA) National Gains Center.
- Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: What works. *Criminology, 34*, 575-608.
- Girard, L., & Wormith, J. (2004). The predictive validity of the Level of Service Inventory-Ontario Revision on general and violent recidivism among various offender groups. *Criminal Justice and Behavior, 31*, 150-181.
- Goldner, J., Peters, T.L., Richards, M.H., & Pearce, S. (2010). Exposure to Community Violence and Protective and Risky Contexts Among Low Income Urban African American Adolescents: A Prospective Study. *Journal of Youth and Adolescence, 40*, 174-186.
- Grattet, R., Petersilia, J., & Lin, J. (2008). *Parole violations and revocations in California*. Washington, D.C.: National Institute of Justice.
- Haney, C. (2003). Mental health issues in long-term solitary and “supermax” confinement. *Crime and Delinquency, 49*, 124-168.

- Hodgins, S., Toupin, J., & Cote, G. (1996). Schizophrenia and antisocial personality disorder: A criminal combination. In L.B. Schlesinger (Ed.) *Explorations in criminal psychopathology: Clinical syndromes with forensic implications*. (pp. 217-237). Springfield, IL: Charles C. Thomas.
- Hulson, B., (1992). Relationship problems and mental illness: Indications for couples therapy. *Sexual & Marital Therapy, 7*, 173-187.
- Junginger, J., Claypoole, K., Laygo, R., & Cristiani, A. (2006). Effects of serious mental illness and substance use on criminal offense. *Psychiatric Services, 57*, 879-882.
- Kessler, R.C., Foster, C.L., Saunders, W.B., & Stang, P.E. (1995). Social consequences of psychiatric disorders: I. Educational attainment. *American Journal of Psychiatry, 152*, 1026-1032.
- Kessler, R.C., Nelson, C.B., McGonagle, K.A., Edlund, M.J., Frank R.G., & Leaf, P.J. (1996). The epidemiology of co-occurring addictive and mental disorders: Implications for prevention and service utilization. *American Journal of Orthopsychiatry, 66*, 17-31.
- Kosterman, R., Hawkins, J.D., Abbot, R.D., Hill, K. G., Herrenkohl, T.I., & Catalano, R.F. (2005). Measures of Positive Adult Behavior and Their Relationship to Crime and Substance Use. *Prevention Science, 6*, 21-332.
- Landenberger, N., & Lipsey, M. (2005). The positive effects of cognitive-behavioral programs for offenders: A meta-analysis of factors associated with effective treatment. *Journal of Experimental Criminology, 1*, 451-476.
- Leschied, A., Chiodo, D., Nowicki, E., & Rodger, S. (2008). Childhood predictors of adult criminality: A meta-analysis drawn from the prospective longitudinal literature. *Canadian Journal of Criminology and Criminal Justice, 50*, 435-467.
- Leufstadius, C., & Eklund, M. (2008). Time use among individuals with persistent mental illness: identifying risk factors for imbalance in daily activities. *Scandinavian Journal of Occupational Therapy, 15*, 23-33.
- Link, B. G. (1987). Understanding labeling effects in the area of mental disorders: An assessment of the effects of expectations of rejection. *American Sociological Review, 52*, 96-112.
- Lipsey, M.W., Chapman, G. & Landenberger, N.A. (2001). Cognitive-behavioral programs for offenders. *Annals of the American Academy of Political and Social Science, 578*, 144-157.
- Lipsey, M.W., & Landenberger, N.A. (2006). Cognitive-behavioral interventions. In B.C. Welshand, & D.P. Farrington (Eds.). *Preventing crime: What works for children, offenders, victims, and places*. Dordrecht, NL: Springer.
- Little, G. L., & Robinson, K. D. (1998). Moral reconnection therapy: A systematic step-by-step treatment system for treatment resistant clients. *Psychological Reports, 62*, 135 -51.

- Lowenkamp, C., Latessa, E., & Holsinger, A. (2006a). The risk principle in action: What have we learned from 13,676 offenders and 97 correctional programs? *Crime and Delinquency*, *52*, 77-93.
- Lowenkamp, C., Latessa, E., & Smith, P. (2006b). Does correctional program quality really matter? The impact of adhering to the principles of effective interventions. *Criminology and Public Policy*, *5*, 201-220.
- Lurigio, A.J, Cho, Y.I., Swartz, J.A., Johnson, T.P., Graf, I., & Pickup, L. (2003). Standardized assessment of substance-related, other psychiatric, and comorbid disorders among probationers. *International Journal of Offender Therapy and Comparative Criminology*, *47*, 630-652.
- MacDonald, E., Luxmoore, M., Pica, S., Tanti, C., Blackman, J., Catford, N., & Stockton, P. (2004). Social networks of people with dual diagnosis: The quantity and quality of relationships at different stages of substance use treatment. *Community Mental Health Journal*, *40*, 451-464.
- McCoy, K., Fremouw, W., Tyner, El, Clegg, C., Johansson-Love, J., & Strunk, J. (2006). Criminal-thinking styles and illegal behavior among college students: Validation of the PICTS. *Journal of Forensic Sciences*, *51*, 1174-1177.
- McCrohan, N.M., Mowbray, C.T., Bybee, D., & Harris, S.N. (1994). Employment histories and expectations of persons with psychiatric disorders. *Rehabilitation Counseling Bulletin*, *38*, 59-71.
- Messina, N., Burdon, W., Hagopian, G., & Prendergast, M. (2004). One year return to custody rates among co-disordered offenders. *Behavioral Sciences and the Law*, *22*, 503-518.
- Metzner, J., & Fellner, J. (2010). Solitary confinement and mental illness in U.S. prisons: A challenge for medical ethics. *Journal of the American Academy of Psychiatry and Law*, *38*, 104-108.
- Monahan, J., Steadman, H.J., Silver, S., Appelbaum, P.S., Robbins, P.C., Mulvey, E.P., Roth, L.H., Grisso, T., & Banks, S. (2001). *Rethinking risk assessment: The MacArthur study of mental illness and violence*. New York: Oxford University Press.
- Morgan, R.D., Fisher, W.H., Duan, N., Mandracchia, J.T., & Murray, D. (2010). Prevalence of criminal thinking among state prison inmates with serious mental illness. *Law and Human Behavior*, *34*, 324-336.
- Morgan, R.D., Fisher, W., & Wolff, N. (2010). Criminal thinking: Do people with mental illness think differently? Policy Brief, Center for Behavioral Health Services and Criminal Justice Research. Accessed August 1, 2011 at http://cbhs.rutgers.edu/pdfs/Policy_Brief_April_2010.pdf
- Morrissey, J., Meyer, P., & Cuddeback, G. (2007). Extending assertive community treatment to criminal justice settings: Origins, current evidence, and future directions. *Community Mental Health Journal*, *43*, 527-544.
- Mueser, K.T., Bennett, M., & Kushner M.G. (1995). Epidemiology of substance use disorders among persons with chronic mental illnesses. In A.F. Lehman & L.B. Dixon (Eds.), *Double jeopardy: Chronic mental illness and substance use disorders* (pp. 9-25). Longhorne, PA: Harwood Academic Publishers.

- Mueser, K.T., Salyers, M.Pl., & Mueser, P.R. (2001). A prospective analysis of work in schizophrenia. *Schizophrenia Bulletin*, 27, 281-296.
- Mulder, E., Brand, E., Bullens, R., & Marle, H.V. (2011). Risk factors for overall recidivism and severity of recidivism in serious juvenile offenders. *International Journal of Offender Therapy and Comparative Criminology*, 55, 118-135.
- Murray, J., & Farrington, D. (2010). Risk factors for conduct disorder and delinquency: Key findings from longitudinal studies. *The Canadian Journal of Psychiatry*, 55, 633-642.
- Naser, R.L., & La Vigne, N.G. (2006). Family support in the prisoner reentry process: Expectations and realities. *Journal of Offender Rehabilitation*, 43, 93-106.
- National Institute of Corrections. (2009). *Mentally ill persons in corrections*. Retrieved February 7, 2009 from <http://nicic.gov/MentallyIllness>.
- Osgood, D.W., Wilson, J.K., O'Malley, P.M., & Bachman, J.G. (1996). Routine activities and individual deviant behavior. *American Sociological Review*, 61, 635-655.
- Osher, F., & Steadman, H. (2007). Adapting evidence-based practices for person with mental illness involved with the criminal justice system. *Psychiatric Services*, 58, 1472-1478.
- Pearson, F., Lipton, D., Cleland, C., & Yee, D. (2002). The effects of behavioral/cognitive-behavioral programs on recidivism. *Crime and Delinquency*, 48, 476-496.
- Peterson, J.K., Skeem, J.L., Hart, E., Vidal, S., & Keith, F. (2010). Comparing the offense patterns of offenders with and without mental disorder: Exploring the criminalization hypothesis. *Psychiatric Services*, 61, 1217-1222.
- Phillips, H.K., Gray, N.S., MacCulloch, S.I. Taylor, J., Moore, S.C., Huckle, P., & MucCulloch, M.J. (2005). Risk assessment in offenders with mental disorder: Relative efficacy of personal demographic, criminal history, and clinical variables. *Journal of Interpersonal Violence*, 20, 833-847.
- Pollock, W., Joo, H.J., & Lawton, B. (2010). Juvenile arrest rates for burglary: A routine activities approach. *Journal of Criminal Justice*, 28, 572-579.
- Porporino, F., & Motiuk, L. (1995). The prison careers of mentally disordered offenders. *International Journal of Law and Psychiatry*, 18, 29-44.
- Prins, S.J., & Draper, L. (2009). *Improving outcomes for people with mental illnesses under community corrections supervision: A guide to research-informed policy and practice*. New York: Council of State Governments Justice Center.
- Regier, D.A., Farmer, M.E., Rae, D.S., Locke, B.Z., Keith, S.J. & Judd, L.L, et al. (1990). Comorbidity of mental disorders with alcohol and other drug abuse. *Journal of the American Medical Association*, 264, 2511-2518.

- Rettinger, L.J., & Andrews, D.A. (2010). General risk and need, gender specificity, and the recidivism of female offenders. *Criminal Justice and Behavior, 37*, 29-46.
- Rice, K.J., & Smith, W.R. (2002). Socioecological models of automotive theft: Integrating routine activity and social disorganization approaches. *Journal of Research in Crime and Delinquency, 39*, 304-336.
- Robbins, P. C., Monahan, J., & Silver, E. (2003) Mental disorder, violence, and gender. *Law and Human Behavior, 27*, 561-571.
- Robins, L.N. (1993). Childhood conduct problems, adult psychopathology, and crime. In S. Hodgins (Ed.) *Mental disorder and crime* (pp. 173-207). Newbury Park, CA: Sage Publications.
- Robins, L.N., & Price, R.K. (1991). Adult disorders predicted by childhood conduct problems: Results from the NIMH Epidemiologic Catchment Area project. *Psychiatry, 54*, 116-132.
- Ross, R., Fabiano, E., & Ewles, C. (1988). Reasoning and rehabilitation. *International Journal of Offender Therapy and Comparative Criminology, 32*, 29-35.
- Rutman, I. D. (1994). How psychiatric disability expresses itself as a barrier to employment. *Psychosocial Rehabilitation Journal, 17*, 15-19.
- Sacks, S., Sacks, J., McKendrick, K., Banks, S., & Stommel, J. (2004). Modified therapeutic community for MICA offenders: Crime outcomes. *Behavioral Sciences and the Law, 22*, 477-501.
- Schmidt, F., Hoge, R.D., & Gomes, L. (2005). Reliability and validity analyses of the Youth Level of Service/Case Management Inventory. *Criminal Justice and Behavior, 32*, 329-344.
- Skeem, J., & Eno Loudon, J. (2007). Assessment of evidence on the quality of the Correctional Offender Management Profiling for Alternative Sanctions (COMPAS). Unpublished report prepared for the California Department of Corrections and Rehabilitation. Available at: <https://webfiles.uci.edu/skeem/Downloads.html>
- Skeem, J., Eno Loudon, J., Manchak, S., Vidal, S., & Haddad, E. (2009). Social networks and social control of probationers with co-occurring mental and substance abuse disorders. *Law & Human Behavior, 33*, 122-135.
- Skeem, J. & Manchak, S. (2010, October). Final outcomes of the longitudinal study: "What really works!" for probationers with serious mental illness. Paper presented at the final meeting of the Macarthur Research Network on Mandated Community Treatment (Tucson, AZ).
- Skeem, J. L., Manchack, M. & Peterson, J. (2010). Correctional policy for offenders with mental illness: Creating a new paradigm for recidivism reduction. *Law and Human Behavior*, online first.
- Skeem, J., Miller, J., Mulvey, E., Monahan, J., & Tiemann, J. (2005). Using a five-factor lens to explore the relationship between personality traits and violence in psychiatric patients. *Journal of Consulting and Clinical Psychology, 73*, 454-465.

- Skeem, J., & Mulvey, E. (2001). Psychopathy and community violence among civil psychiatric patients: Results from the MacArthur Violence Risk Assessment Study. *Journal of Consulting and Clinical Psychology, 69*, 1-23.
- Skeem, J., Nicholson, E., & Kregg, C. (2008, March). Understanding barriers to re-entry for parolees with mental illness. In D. Kroner (Chair), *Mentally disordered offenders: A special population requiring special attention*. Symposium conducted at the meeting of the American Psychology-Law Society (Jacksonville, FL).
- Steadman, H., Monhan, J., Duffee, B., Hartstone, E., & Robbins, P. (1984). The impact of state mental hospital deinstitutionalization on United States prison populations, 1968-1978. *Journal of Criminal Law and Criminology, 75*, 474-490.
- Steadman, H.J., Mulvey, E.P., Monahan, J., Robbins, P.C., Appelbaum, P.S., Grisso, T., Roth, L.H., & Silver, E. (1998). Violence by people discharged from acute psychiatric inpatient facilities and by others in the same neighborhoods. *Archives of General Psychiatry, 55*, 394-401.
- Steadman, H., Osher, F., Robbins, P., Case, B., & Samuels, S. (2009). Prevalence of serious mental illness among jail inmates. *Psychiatric Services, 60*, 761-765.
- Svensson, R., & Oberwittler, D. (2010). It's not the time they spend, it's what they do: The interaction between delinquent friends and unstructured routine activity on delinquency: Findings from two countries. *Journal of Criminal Justice, 38*, 1006-1014.
- Teitler, J.O., & Reichman, N.E. (2008). Mental illness as a barrier to marriage among unmarried mothers. *Journal of Marriage and Family, 20*, 772-782.
- Teplin, L. (1990). The prevalence of severe mental disorder among urban male jail detainees: Comparison with the epidemiologic catchment area program. *American Journal of Public Health, 80*, 663-669.
- Teplin, L., Abram, K., & McClelland, G. (1996). Prevalence of psychiatric disorders among incarcerated women: Pretrial jail detainees. *Archives of General Psychiatry, 53*, 500-512.
- Toch, H., Adams, K., Grant, J.D. and Lord, E. (2002). *Acting out: Maladaptive behavior in confinement*. Washington, D.C.: American Psychological Association.
- Vose, B., Lowenkamp, C.T., Smith, P., & Cullen, F.T. (2009). Gender and the predictive validity of the LSI-R: A study of parolees and probationers. *Journal of Contemporary Criminal Justice, 25*, 459-471.
- Walters, G.D. (1995) The Psychological Inventory of Criminal Thinking Styles, Part I: Reliability and preliminary validity. *Criminal Justice and Behavior, 22*, 307-325.
- Walters, G.D. (2002). The Psychological Inventory of Criminal Thinking Styles (PICTS): A review and meta-analysis. *Assessment, 9*, 278-291.

- Walters, G.D. (2009). The Psychological Inventory of Criminal Thinking Styles and Psychopathy Checklist: Screening version as incrementally valid predictors of recidivism. *Law and Human Behavior, 33*, 497-505.
- Walters, G.D. (2010). Predicting institutional adjustment with the Psychological Inventory of Criminal Thinking Styles composite scales: Replication and extension. *Legal and Criminal Psychology, 12*, 69-81.
- Walters, G.D., & Schlauch, C. (2008). The psychological inventory of criminal thinking styles and level of service inventory-revised: Screening version as predictors of official and self-reported disciplinary infractions. *Law and Human Behavior, 32*, 454-462.
- Webster, C., Douglas, K., Eaves, D., & Hart, S. (1997). HCR-20: Assessing risk for violence (version 2). Burnaby, BC: Mental Health, Law, and Policy Institute, Simon Fraser University.
- White, M.C., Chafez, L., Collins-Bride, G., & Nickens, J. (2006). History of arrest, incarceration and victimization in community-based severely mentally ill. *Journal of Community Health, 31*, 123-135.
- Wilson, D., Bouffard, L., & MacKenzie, D. (2005). A quantitative review of structured, group-oriented, cognitive-behavioral programs for offenders. *Criminal Justice and Behavior, 32*, 172-204.
- Young, S.J., Chick, K. & Gudjonsson, G. (2010). *A preliminary evaluation of reasoning and rehabilitation 2 in mentally disordered offenders (R&R2M) across two secure forensic settings in the United Kingdom*. Journal of Forensic Psychiatry and Psychology. Available online at <http://www.informaworld.com>.
- Young, S.J. & Ross, R.R. (2007). *R&R2 for youths and adults with mental health problems: A Prosocial competence training program*. Ottawa: Cognitive Centre of Canada (cogcen@canada.com).