Applicability of the Risk-Need-Responsivity Model to Persons With Mental Illness Involved in the **Criminal Justice System**

Jennifer L. Skeem, Ph.D., Henry J. Steadman, Ph.D., Sarah M. Manchak, Ph.D.

Objective: National efforts to improve responses to persons with mental illness involved with the criminal justice system have traditionally focused on providing mental health services under court supervision. However, a new policy emphasis has emerged that focuses on providing correctional treatment services consistent with the risk-needresponsivity (RNR) model to reduce recidivism. The objective of this review was to evaluate empirical support for following the RNR model (developed with general offenders) with this group and to pose major questions that the field needs to address.

Methods: A comprehensive search using PubMed and Psyc-INFO yielded 18 studies that addressed the applicability of the RNR model to the target population. The results of these studies were synthesized.

Results: There is strong support for using general risk assessment tools to assess this group's risk of recidivism. Preliminary evidence indicates that cognitive-behavioral programs targeting general risk factors are more effective than psychiatric treatment alone. However, there is as yet no direct support for the applicability of the three core RNR principles to treat this population.

Conclusions: Although the new policy emphasis shows substantial promise, the field must avoid rushing to the next "evidence base" too rapidly and with too little data. There must be explicit recognition that RNR principles are being applied to a new population with unique characteristics (mental illness combined with justice system involvement), such that generalizability from general offender samples is uncertain. Moreover, public safety goals for the target population should not eclipse those related to public health. This group's unique features may affect both the process and outcomes of treatment.

Psychiatric Services 2015; 66:916-922; doi: 10.1176/appi.ps.201400448

There is now wide recognition that individuals with mental illness are grossly overrepresented in the criminal justice system, as reflected in recent headlines such as "The new asylums: jails swell with mentally ill" (1) and "Inside a mental hospital called jail" (2). A number of studies have brought the scope of this problem into clear public view. They indicate, for example, that approximately two million admissions to U.S. jails annually are of persons who are acutely mentally ill (3) and 75%-80% have co-occurring substance use disorders (4).

This problem has attracted attention from policy makers and practitioners, inspiring national efforts to improve responses to people with mental illness who come into contact with the criminal justice system, including efforts by the Council of State Governments Justice Center mental health project (csgjusticecenter.org/mental-health) and the GAINS Center (gainscenter.samhsa.gov). These responses include community-based alternatives to incarceration, such as arraignment diversion (pretrial or postdisposition), jail-based

diversion, specialty treatment courts (for example, mental health courts and drug courts), and specialty probation supervision programs. Historically, these efforts have focused on providing mental health services under court supervision (5). In the past few years, however, a new policy emphasis on providing correctional treatment services to reduce criminal recidivism has emerged. This new emphasis draws from the risk-need-responsivity (RNR) model (6,7) of correctional assessment and treatment. The RNR model has been proposed for application to justice-involved persons with mental illness to focus directly on public safety goals (that is, reduced recidivism, jail days, and criminal justice costs). Although proponents do not advocate stopping interventions focused on public health goals (that is, on reducing symptoms and improving functioning), the growth of the RNR approach has led to a deemphasis of mainstream evidence-based mental health practices for this population. A recent example of this emergent emphasis is the publication Adults With Behavioral Health Needs Under Correctional

Supervision: A Shared Framework for Reducing Recidivism and Promoting Recovery (8). In this framework, mental health treatment is framed as a necessary but often not sufficient method for improving outcomes.

The new emphasis on treatment principles drawn from the corrections field may reflect a convergence of a number of factors, including a lack of evidence that psychiatric services reliably reduce recidivism (5), an evolution in the forensic mental health field from a focus on risk assessment (for violence) to risk reduction (for violence and other criminal behavior), a resurgence in the use of risk assessment to inform sanctioning decisions in the justice system (9), and the fact that many initiatives for justice-involved persons with mental illness are now funded by justice agencies (whose chief mission is to improve public safety). Regardless of its genesis, the new emphasis directs attention toward correctional services that have been shown to reduce recidivism among general offenders as a basis for responding to crime by those with mental illness.

There are reasons to welcome this new emphasis. First, it challenges the myth that the way to reduce justice system involvement among persons with mental illness is simply by providing psychiatric treatment or reducing symptoms. Because mental illness rarely leads directly to criminal behavior (10,11), one can effectively address the public health goal for this group without reaching the public safety goal (5,12,13). Second, this new emphasis recognizes that justiceinvolved individuals with mental illness often have general risk factors for criminal behavior, such as antisocial traits (14,15), and that these factors can be effectively treated to reduce recidivism (6).

At the same time, the field must avoid rushing to the next "evidence base" too rapidly and with too little data. Swapping prioritization of psychiatric services (which have been shown to improve clinical outcomes for people with mental illness) for emphasis on correctional services (which have been shown to reduce recidivism for offenders) may not represent much of an advance. There must be explicit recognition that these services are being applied to a new population with unique characteristics (mental illness combined with justice system involvement), such that generalizability from the general offender population is uncertain and must be tested. Similarly, the notion of integrating correctional and psychiatric services is appealing, but there is little empirical guidance on this point. Services may not be effective if we shortcut studying how the unique features of this group affect the process and outcome of treatment.

The goal of this article is to highlight empirical support for following the RNR model with justice-involved people with mental illness and to pose major questions that the field needs to address in order to truly improve outcomes for this population. We begin by discussing the evidence base for generalizing correctional assessment principles to this group. Then we turn to empirical support for generalizing correctional treatment principles that specify who should be

treated (those at relatively high risk of recidivism, according to the "risk" principle), what should be treated (variable risk factors for crime, according to the "need" principle), and how treatment should be delivered (in a way that maximizes treatment engagement and is responsive to specific abilities, according to the "responsivity" principle) (6).

METHODS

PubMed and PsycINFO were reviewed for English-language empirical studies that addressed—directly or indirectly—the applicability of the RNR model to people with serious mental illness. Studies focused on paraphilia, substance use disorders only, personality disorders, trauma and posttraumatic stress disorder, and cognitive disorders were excluded. Search criteria included RNR, risk principle, need principle, responsivity principle, or cognitive-behavior* AND mental*, psych*, or clinical in any field. We identified 18 studies that met our criteria (14-31), all of which are referenced below, along with additional articles that help contextualize the findings.

RESULTS AND DISCUSSION

Correctional Assessment

RNR is a model of "correctional assessment and treatment" (emphasis added) (6). The administration of a well-validated risk assessment tool is viewed as the foundation for effective risk reduction, because such tools can inform service contacts (who to treat, what to treat, when to shift treatment targets, and so forth). Therefore, beyond the long-standing emphasis on assessing clinical symptoms and functioning for justice-involved people with mental illness, there is a new emphasis on accurately assessing their risk of recidivism (8). The generalizability questions are these: Are "risk-needs" tools developed for general correctional populations reliable and valid for this group? If so, are they useful for informing services (to realize RNR treatment principles)?

Among the principles we review in this article, the evidence that correctional assessment principles generalize to the target population seems strongest. First, this group tends to manifest robust risk factors for recidivism (32). For example, the leading correctional risk assessment tool, the Levels of Service/Case Management Inventory (LS/CMI) (33), assesses criminal history, antisocial personality pattern (stimulation seeking, low self-control, and anger), procriminal attitudes (values and thinking styles supportive of crime; for example, misperceiving benign remarks as threats and demanding instant gratification), antisocial associates, substance abuse problems, employment instability, family problems, and low engagement in prosocial leisure pursuits. On the basis of a matched sample of 221 parolees with and without serious mental illness, Skeem and colleagues (15) found that parolees with mental illness scored somewhat higher than those without mental illness on the LS/CMI. Similar results were obtained on the LS/CMI in a study of 630 probationers with and without mental illness (16). Moreover, procriminal attitudes—a robust risk factor—appear at least as common among justice-involved people with mental illness as their counterparts without mental illness (17–19).

Second, these general risk factors can be measured reliably and have predictive validity with this group (15,16,20). For example, Skeem and colleagues (15) found that the LS/CMI significantly predicted the target population's recidivism and that risk factors unique to persons with mental illness (for example, acute symptoms and medication noncompliance, which were operationalized with the HCR-20 risk assessment tool [34]) added no incremental utility to the predictive utility of the LS/CMI. Studies by both Skeem and colleagues (15) and Girard and Wormith (16) found that mental illness did not moderate (that is, alter) the predictive utility of the LS/CMI for recidivism. These results are consistent with findings (35) that the target population has general risk factors for recidivism (14), that validated tools overlap substantially in assessment of these risk factors (36), and that these validated tools are "essentially interchangeable" in their level of predictive accuracy 35,37). Indeed, a larger literature indicates that the strongest risk factors for crime are shared among justiceinvolved individuals, whether they have mental illness or not (14).

Third, there is preliminary evidence that treatment programs that explicitly address general risk factors significantly reduce procriminal attitudes (21–24) or recidivism (25) for this group. However, as explained below, little is known about whether RNR treatment principles per se generalize to justice-involved persons with mental illness. For this reason, risk assessment alone (that is, without measures of symptoms and functioning) might provide an insufficient basis for informing effective correctional services for this group.

Case Prioritization: The Risk Principle

Meta-analyses of controlled studies of general offenders indicate that correctional treatment programs are most effective in reducing recidivism when intensive treatment services are reserved for those at highest risk of reoffending (38–40). As Andrews (6) summarized: "According to the risk principle, nothing positive in terms of crime prevention can be derived from delivering services to persons who are at low risk of re-offending in the absence of service. The effect will be nil at best and an increase in offending at worst. It is the recidivism of higher risk cases that will be reduced through the delivery of appropriate services."

Conceptually, if the goal is to increase public safety, then it makes sense to reserve intensive services for the subgroup of justice-involved persons with mental illness who are at higher risk of recidivism. Indeed, the risk principle is a useful empirical antidote to clinicians' preference to exclude "antisocial" clients from treatment and work with more pleasant and compliant lower-risk clients. Despite therapeutic

pessimism, a growing body of evidence from well-controlled studies indicates that high-risk offenders and psychiatric patients respond to intensive treatment with reduced violence and other antisocial behavior (41). Nevertheless, we could not locate any directly relevant studies—for example, controlled studies of the extent to which a program's adherence to the risk principle is associated with its effect on this group's recidivism (42) or experiments that test whether a program's effect is moderated by risk status (42,43).

In short, although there is preliminary evidence that higher-risk persons with mental illness should receive intensive services, caution is warranted in directly generalizing the risk principle to this group. It seems particularly premature to exclude low-risk individuals from services without additional data and without appropriate qualifiers (indeed, this is not recommended in the shared framework [8]). Even if future studies robustly indicate that programs for this group are most effective in reducing recidivism when they specifically target high-risk cases, one must remember that the risk principle is designed to increase public safety, not to improve health and welfare. The target population has pressing behavioral health needs. If policy goals reach beyond reducing recidivism-as we believe they should—then strict adherence to the risk principle may have costs.

One study provided indirect support for this notion. Using a matched sample of 367 probationers with serious mental illness who were followed for two years, Skeem and Manchak (26) calculated and compared the costs of specialty mental health versus traditional probation supervision (focusing on criminal justice and mental health system costs). Results of propensity-weighted analyses indicated that specialty probation was cost-effective, compared with traditional supervision (mean cost per probationer of approximately \$15,000 versus \$20,000, respectively). In contrast with our expectations, however, there was little evidence that this was because enhanced expenditures on specialty supervision and outpatient treatment were offset by recidivism-related savings. Instead, the savings of specialty mental health probation accrued chiefly through reduced expenditures on costly emergency and inpatient psychiatric services (mean cost per probationer of approximately \$1,000 versus \$6,000 for traditional supervision).

This specialty probation program did not focus on persons at high risk of recidivism. It is unclear whether doing so would have increased the program's cost-effectiveness (because symptoms and recidivism risk are moderately correlated, such that those at risk of repeated clinical crises often are also at risk of recidivism [15]) or would have decreased the program's cost-effectiveness (because some are at high clinical risk but low or moderate recidivism risk). Still, the results raise the possibility that addressing clinical needs could net large returns in other domains, even if symptom control rarely translates into reduced recidivism (5). If so, this lends credence to the Council of State Governments' unvalidated but logical approach of tailoring services to an

individual along two separable dimensions: clinical impairment (as impairment increases, so should emphasis on health services) and recidivism risk (as risk increases, so should emphasis on correctional services) (44).

Treatment Targets: The Need Principle

Research robustly indicates that the effectiveness of correctional treatment programs in reducing recidivism depends on the number of "criminogenic needs" that they target (that is, risk factors for crime, such as procriminal attitudes), compared with "noncriminogenic needs" (that is, disturbances that impinge on functioning, such as emotional distress) (38-40). "In other words, the number of criminogenic needs targeted minus the number of noncriminogenic needs targeted should have a positive value (indicating that criminogenic needs are targeted predominantly)" (6). Andrews (6) generally emphasized as relevant treatment targets the eight criminogenic needs assessed by the LS/CMI (for example, antisocial traits, attitudes, and associates, as described above).

Given that programs for justice-involved persons with mental illness traditionally have focused on clinical variables that are not strongly related to recidivism and are best understood as noncriminogenic (for example, psychosis and treatment compliance) (5,14), new emphasis on the need principle would represent a policy shift for this group. However, the shift could encompass a few familiar targets, given that some "normative" risk factors for crime (for example, externalizing features such as anger and impulsivity) are also defined as symptoms of some mental disorders (10). Put simply, correctional treatment has a different prototypic target population and outcome than mental health treatment, but the two forms of treatment overlap at their edges in some relevant methods (for example, cognitive-behavioral therapy [CBT]) and in some goals (for example, emotion regulation).

There is substantial indirect support for generalizing the need principle to persons with mental illness. First, the results of several rigorous experiments indicate that evidence-based mental health services have little effect on criminal justice outcomes (5). Years ago, this led scholars to call for "interventions that specifically target reduction of criminal behavior" (45). Second, as explained above, the strongest risk factors for recidivism are shared by those with and without mental illness. If risk factors that maintain criminal behavior are common among those with mental illness, then programs that predominantly target other variables may not reduce recidivism. Third, the few controlled studies of treatments that explicitly target general risk factors for crime in this group have produced positive results.

Specifically, CBT programs target robust risk factors for recidivism and provide opportunities for acquiring and practicing prosocial skills for interpersonal interaction, selfmanagement, and problem solving. Of correctional service types, CBT programs achieve the largest and most consistent effect sizes in reducing criminal recidivism (6,46). Some CBT programs have been modified or applied to justiceinvolved persons with mental illness. First, a modified version of "Reasoning and Rehabilitation" (R&R) designed to accommodate cognitive limitations that can accompany mental illness (27) has been shown in a number of controlled studies to significantly reduce procriminal attitudes among forensic patients (21-24). In one of these studies, R&R also reduced verbal aggression (for up to 12 months) but not violence (28). Second, reentry programs with a focus on "criminal thinking" have been shown to reduce recidivism for this population. For example, Sacks and colleagues (25) randomly assigned 134 inmates to participate in either a prison-based psychiatric treatment program or a 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 and community group (5%). Another study had similar results (29).

These results are promising, but the extent to which the CBT program's effect is attributable to its focus on general risk factors per se is unclear. More direct study is required. Even in the broader correctional literature, there is little compelling evidence that "criminogenic needs" are, in fact, causal risk factors and therefore appropriate treatment targets. As Monahan and Skeem (47) noted:

A causal risk factor (a) can be changed through intervention (i.e., is a variable risk factor) and (b), when changed through intervention, can be shown to change the risk of recidivism. The most compelling form of evidence that a risk factor was causal would be a randomized controlled trial in which a targeted intervention was shown to be effective in changing one or more variable risk factors, and the resulting changes were shown to reduce the likelihood of post-treatment recidivism. The point to be emphasized is that it is nearly impossible to locate such randomized controlled tests of causal risk factors for recidivism. Criminal thinking patterns and substance abuse come closest to qualifying as causal risk factors.

As more research of this nature accumulates, we believe there are two interim reasons to avoid focusing services exclusively on "criminogenic needs." First, a growing number of studies indicate that symptoms such as delusions and hallucinations occasionally directly precede violence and other criminal behavior: 4% of 113 arrests (30); 5% of 109 offenders (11); 4% of 429 arrests (10); and 12% of 305 violent incidents (48). At the same time, this research indicates that these symptom-based crimes do not "cluster" by person; instead, they are distributed quite randomly across individuals (many have no symptom-based crimes, and some have a symptombased crime among crimes caused by other factors) (10,48). The policy upshot is that symptoms should be routinely treated among justice-involved people with mental illness, with the understanding that this may prevent a small but important minority of (unpredictable) symptom-preceded crimes.

The second reason to avoid focusing services too exclusively on general risk factors is that these variables may sometimes interact with mental illness to exponentially increase risk. When clinical factors potentiate general risk factors, they become part of the criminogenic story that should be assessed and targeted with services that are "wise" to their interaction. There are signs that this is an area ripe for research. For example, substance abuse is a robust general risk factor for crime (6) that affects people with mental illness more often than those without mental illness (49). Indeed, Junginger and colleagues (30) found that nearly one in four people with mental illness committed an index offense that was "probably to definitely" related to substance abuse, either directly or indirectly. Moreover, substance abuse can interact with mental illness to exponentially raise the likelihood of involvement in violence. In the MacArthur Community Violence Study (31), the prevalence of violence among about 1,000 people discharged from a psychiatric hospital was about the same as the prevalence of violence among a comparison sample of more than 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' rate of violence during that ten-week period substantially more than that of their neighbors.

Similar results have been found for violence history, another general risk factor for crime. In a study of more than 2,600 prison inmates, Walters and Crawford (50) found that a history of violence interacted with mental illness to raise the likelihood of institutional infractions. In short, studies such as these suggest that mental illness can become "criminogenic" when paired with other risk factors. If so, the usual approach for implementing the need principle may require revision when applied to those with mental illness.

Treatment Process/Format: Responsivity Principle

The RNR responsivity principle has two components that describe "how" to intervene in a manner that engages offenders and helps them learn and change. General responsivity refers to general techniques and processes, identifying behavioral and cognitive-behavioral strategies as most effective; and specific responsivity refers to "building on the strengths of the case and removing and reducing barriers to full participation" (6), that is, tailoring styles and modes of service to relevant individual characteristics (for example, level of motivation; gender, age and maturity, and ethnicity and culture; and cognitive skills). There is strong meta-analytic evidence for general responsivity, in that controlled studies have consistently indicated that behavioral and CBT approaches are most effective in reducing recidivism (see section on the need principle above). There is decidedly less support for specific responsivity; evidence "is generally favorable but very scattered" and has not been subject to meta-analysis (6).

We are aware of no empirical support for the responsivity principle among persons with mental illness. Nevertheless, in contemporary discourse about applying the RNR model to this group, mental illness is often asserted to be a (specific) responsivity issue (8). Moreover, clinicians have "voted with their feet" on this issue by revising CBT programs to fit the cognitive and functional limitations that people with mental illness may experience (51).

Logic dictates that symptoms and clinical impairment can complicate correctional treatment. A person experiencing acute psychosis, for example, may not absorb a CBT group session focused on procriminal attitudes. Antipsychotic medication might control the individual's hallucinations and organize his or her thinking enough to do so. Theoretically, then, mental health services could work synergistically with correctional services—each potentiating the other. It is also possible that symptom control and improved functioning would help these individuals live in a manner that reduces the likelihood of violating technical conditions of community release (52).

At present, however, these possibilities are speculative. As Andrews (6) cautioned, there is a tendency to "misuse" specific responsivity "as a way to keep doing what has always been done. For example, a focus on relieving mental illness or addressing gender-informed factors (for example, trauma and victimization, poverty, and emotional problems) may be treated as even more important than adherence to the core RNR principles. Noncriminogenic needs that clinicians enjoy addressing may be mistakenly declared to be specific responsivity factors that demand special attention."

This "misuse" may be based on incomplete knowledge about the interplay between criminogenic needs and mental illness. For these reasons, it is critical to test the applicability of the responsivity principle to people with mental illness. This is the only way to determine where the bounds should be placed and for whom, in emphasizing correctional or mental health service principles.

CONCLUSIONS

The message here is first one of caution. We believe that with appropriate attention to the question of specific responsivity, the RNR model will improve programs' ability to reach both public safety and public health goals for justice-involved persons with mental illness. However, there is a remarkable absence of empirical support for this belief.

This raises the second core message of our analysis. There is a critical need for focused research on how specific responsivity factors interact with the better-validated factors in the RNR model. To date, almost all relevant work has focused on the risk and need principles of the RNR model (for one recent exception, see Lowenkamp and colleagues [42]). Ideally, responsivity would be studied as a potentially integral component of the model that recognizes heterogeneity in the target population (the shared framework [8] provides a testable map for doing so).

As the RNR model is increasingly embraced for people with mental illness, it behooves the field to proceed deliberately

in application-and to proceed with haste to produce data to support (and likely qualify) its use. Risk and needs assessment have little value without a strong evidence base to respond effectively with this group.

AUTHOR AND ARTICLE INFORMATION

Dr. Skeem is with the School of Social Welfare and the Goldman School of Public Policy, University of California, Berkeley (e-mail: jenskeem@ berkeley.edu). Dr. Steadman is with Policy Research Associates, Inc., Delmar, New York. Dr. Manchak is with the School of Criminal Justice, University of Cincinnati, Ohio.

The authors report no financial relationships with commercial interests. Received September 30, 2014; revision received December 9, 2014; accepted January 22, 2015; published online May 1, 2015.

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