Risk-Reducing Interventions for Justice-Involved Individuals: A Critical Review

Kirk Heilbrun, David DeMatteo, Chris King, Alice Thornewill and Sarah Phillips

The importance of services to justice-involved individuals that reduce the risk of re-offense seems clear. Both individuals receiving such services and the larger society in which they live benefit from responsible, prosocial behavior rather than criminal offending. However, there are important questions about the purpose, nature, and empirical support for rehabilitative services provided to individuals who become involved with the criminal justice system. These questions are addressed in this chapter, which also reviews the existing evidence supporting various kinds of interventions.

Scope and Definitional Considerations

In this chapter, we define "justice-involved" as, at minimum, having been arrested for criminal charges. We define this broadly to include arrests that may result in diversion or specialized intervention at first booking, jail, prison reentry, or parole —four of the five intercepts on the Sequential Intercept Model[1] (Griffin et al. 2015; Munetz and Griffin 2006). Our focus is adults, so we do not review evidence related to the rehabilitation of juvenile offenders. Although much of the evidence discussed

[1]The Sequential Intercept Model is a conceptual model that identifies five points at which standard criminal processing can be interrupted to provide diversion to treatment-oriented alternatives: (1) law enforcement/emergency services, (2) booking/initial court hearings, (3) jails/courts, (4) reentry, and (5) community corrections/community support.

K. Heilbrun (✉) · D. DeMatteo · C. King · A. Thornewill · S. Phillips
Department of Psychology, Drexel University, 119 Stratton Hall, 3141 Chestnut St., Philadelphia, PA 19104, USA
e-mail: kirk.heilbrun@drexel.edu; kh33@drexel.edu

D. DeMatteo
e-mail: dsd25@drexel.edu

B.H. Bornstein and M.K. Miller (eds.), *Advances in Psychology and Law*, Advances in Psychology and Law 2, DOI 10.1007/978-3-319-43083-6_9

in this chapter relates to the rehabilitation of offenders with behavioral health disorders,[2] we also cover rehabilitative interventions for individuals without such disorders. "Risk reduction" refers to lowering the risk of criminal reoffending, although we do not see this as mutually exclusive from clinical symptomatic improvement and recovery (as discussed in the section on the Clinical vs. Criminogenic Debate, later in this chapter). We address evidence regarding interventions in the community, in nonsecure residential settings (e.g., halfway houses), and in prisons and secure hospitals. We exclude only jails, as a substantial proportion of individuals in jails are detained pending disposition of charges, making it impossible to meaningfully separate the predisposition detention mission of jails for these individuals from the post-sentence secure rehabilitative mission of jails regarding sentenced individuals. We do not cover evidence regarding psychotropic medication. Remaining interventions, however—therapy/counseling, case management, and milieu—are addressed in the present chapter.

Prevalence of Behavioral Health Disorders in Justice-Involved Individuals

The estimated prevalence of behavioral health disorders among individuals involved with the criminal justice system depends on several considerations. One is how broadly "behavioral health" is defined, with some investigators using only severe mental illness and others broadening that definition to include nonpsychotic depression, anxiety, trauma, substance abuse, and intellectual disability. A second consideration is how this information is gathered; this ranges from self-report of specific symptoms to a very detailed structured diagnostic interview such as the Structured Clinical Interview for DSM-5 (First et al. 2015) supported by documented history. A third variable involves where the individual is placed: jails, state and federal prisons, and community-based placements all appear in the literature (see Sarteschi 2013, for a summary).

For present purposes, it is less important to identify precise estimates than to make a larger point: the prevalence of broadly defined behavioral health disorders in those involved in the criminal justice system is substantial and apparently increasing. It was estimated in 1999 that 7.4 % of federal offenders, 16.2 % of state offenders, and 16 % of those on probation had "mental health problems" (Ditton 1999). In 2006, by comparison, a Bureau of Justice Statistics report described 45 % of federal offenders and 56 % of state offenders as experiencing mental health problems (James and Glaze 2006). Using a structured clinical interview, Steadman et al. (2009) gathered Connecticut jail data that they used to estimate the national

[2]This is defined broadly to include serious mental illness, substance abuse, anxiety disorders, personality disorders, intellectual disability, brain dysfunction, learning disorders, trauma-related disorders, and disorders of attention and concentration.

prevalence of severe mental illness in jail populations as 17.1 % for males and 34.3 % for females. Other estimates of rates of significant behavioral health problems include 76 % (jail or probation; Castillo and Fiftal Alarid 2011), 18 % (New Jersey prisons; Blitz et al. 2005), and 78 % (probation or parole; Solomon et al. 2002). But severe mental illness is only a part of the broader spectrum of behavioral health disorders experienced by justice-involved individuals; substance use disorders, anxiety, and PTSD are also estimated to be common within this population (NCCHC 2002; Sarteschi 2013).

Considering this evidence, it seems justifiable to conclude that at least half (and perhaps more) of justice-involved individuals experience at least one behavioral health disorder when defined as broadly as is done in this chapter. This means that rehabilitative services delivered to such individuals could focus only on clinical outcomes such as symptom remission and still be insufficient to treat all individuals with significant clinical needs.

Despite the apparent breadth of such clinical need, however, we suggest that a primary focus on clinical treatment and traditional clinical outcomes is not appropriate for a justice-involved population. Services to justice-involved individuals are almost entirely publicly funded, and society has a substantial interest in supporting rehabilitative services that reduce the risk of further offending. But how can we reconcile this overwhelming need for behavioral health services in contemporary justice-involved populations with the legitimate societal interest in public safety? The answer has two parts. First, rehabilitative interventions for both offense risk reduction *and* behavioral health needs must be identified; second, we must employ those interventions that provide the greatest impact for shared treatment goals—those that both reduce re-offense risk *and* improve behavioral health functioning. This is discussed in more detail in the next two sections.

Risk-Need-Responsivity as an Organizing Structure

The Risk-Need-Responsivity (RNR) model (Andrews and Bonta 2010) was developed to help structure assessment and intervention planning for those under correctional supervision, with the goal of reducing re-offense risk. It has three principles. The risk principle requires that re-offense risk be measured accurately, and those at high risk be treated more intensively and longer. The need principle requires targeting criminogenic needs (those associated with the likelihood of re-offending); through improving criminogenic deficits and strengthening protective factors for an individual, the risk of re-offending is reduced. The responsivity principle has two components: tailoring of risk-reducing services to individual capacities (specific responsivity) and providing such services in modalities such as cognitive behavioral or social learning that have been empirically supported with this population (general responsivity). Research has yielded support for seven major dynamic risk factors associated with re-offense risk: antisocial personality pattern, procriminal attitudes, antisocial associates, poor use of leisure time, substance

abuse, problematic marital or family circumstances, and problematic circumstances at school or work (Andrews and Bonta 2010). Several meta-analyses support the applicability of this model to various justice-involved populations (Andrews 2012 (*k* number of tests of treatment = 374); Andrews and Bonta 2010 (*k* controlled experimental tests of the effects of various judicial/correctional treatment interventions on recidivism = 374); Dowden and Andrews 1999 (*k* unique studies of correctional treatment programs for female offenders = 26, with 45 effect sizes), 2000 (*k* primary studies of correctional treatment programs for violent offenders = 35, with 52 tests); Hanson et al. 2009 (*k* studies of sex offender treatment = 23). In this chapter, we specify the number of *relevant* comparisons or studies, *k,* upon which cited meta-analyses were based; this figure is not always the same as the total number of comparisons or studies upon which a meta-analysis was based.

The question of the RNR model's applicability to individuals with behavioral health problems has been addressed partly by a meta-analysis incorporating offenders with and without mental illness (Bonta et al. 1998), which identified primarily the same risk factors for both groups (*k* unique samples = 64). It has also been addressed through an updated meta-analysis (Bonta et al. 2013, using comparisons/"studies" *k* = 126, drawn from 96 unique samples of mentally disordered offenders). In the 1998 study, clinical diagnosis was not associated with re-offense risk. In the 2013 study, the authors concluded that RNR risk/need factors are more predictive of general and violent recidivism than clinical factors (with the exception of antisocial personality/psychopathy). It is reasonable to conclude, therefore, that many offenders (whatever their behavioral health needs) are influenced in their propensity for offending by a set of common influences that are described by RNR. Two other questions arise, however. Is there a small subgroup of justice-involved individuals who are influenced primarily by mental health needs—and on whom RNR-identified criminogenic needs have little influence? Is there a difference in how an intervention should be delivered to two groups when one group has substantial behavioral health needs (e.g., major mental illness) and the second group does not, but both share the risk factor of substance abuse? These questions are discussed further in subsequent sections.

Clinical Versus Criminogenic Interventions: Toward a Partial Resolution

Separate teams of investigators have addressed the question of whether justice-involved individuals with severe mental illness commit offenses that are directly linked to their symptoms. Considering jail detainees in a diversion program (Junginger et al. 2006) and those with mental illness on parole (Peterson et al. 2010), both teams concluded that in only about 10 % of cases was the experience of symptoms of mental illness (e.g., auditory hallucinations, paranoid delusions) directly related to the offending behavior. A review of 18 relevant studies (Skeem et al. 2015b) indicated strong support for using general risk assessment tools to

assess recidivism risk for mentally disordered offenders, and preliminary evidence suggested that cognitive-behavioral interventions are more effective in targeting general risk factors than psychiatric treatment alone. However, they also found no direct support for the applicability of the three core RNR principles in treating mentally disordered offenders. Among high-risk mentally disordered offenders, data from the MacArthur Risk Study indicate that psychosis immediately preceded 12 % of serious acts of violence, but the great majority of the 100 individuals studied (80 %) had exclusively "nonpsychosis-preceded" violence (Skeem et al. 2015a). Both criminogenic and psychotic factors have predictive efficacy in mentally disordered offenders (Prins et al. 2015). However, a detailed investigation of 143 mentally disordered offenders using interviews and record reviews revealed that symptoms rarely directly motivated the offenses (of the 429 crimes coded, 4 % related directly to psychosis, 3 % related directly to depression, and 10 % related directly to bipolar disorder) (Peterson et al. 2014).

These are important findings. They are particularly relevant to the assumption that treatment of only mental health symptoms will reduce re-offense risk among justice-involved individuals with serious mental illness. It led to the recent proposal that the great majority of this group should be rehabilitated using RNR to guide a focus upon criminogenic needs (Eno Louden et al. 2015).

In this chapter, we propose a modified version of this argument. Acknowledging the strong evidence that it is criminogenic needs, not traditional mental health symptoms, that are largely linked to offending behavior within this population, we also note that outpatient treatment (primarily psychotropic medication) significantly reduces the risk of arrest among such individuals (Van Dorn et al. 2013). This suggests (consistent with Prins et al. 2015) that psychotropic medication may have a favorable impact on *both* symptom reduction *and* rearrest risk, and hence should be prominent among the interventions used with this population.

We continue this analysis with a careful review of criminogenic needs identified by RNR. By considering which of these may provide the greatest benefit on both criminogenic and clinical grounds, we approach this criminogenic versus clinical question by removing the dichotomy. What are the criminogenic needs that are also important for behavioral health and recovery? The following sections address this question in the context of cognitive interventions, problem-solving interventions, and behavioral health interventions.

Cognitive Interventions

Cognitive interventions, in contrast to more traditional behavioral approaches, focus on the importance of internal thought processes in regulating and changing behavior (Bandura 1969). The foundation of cognitive therapy was established in 1961 by Albert Ellis, a psychologist who created "rational emotive therapy" based on the theory that thoughts control feelings (Ellis and Harper 1975). Following Ellis' work, psychiatrist Aaron Beck founded and developed modern-day cognitive

therapy. Under Beck's cognitive model, therapists help individuals overcome difficult emotions by teaching them to change unproductive or irrational thoughts that lead to upsetting emotional reactions. By identifying and changing distorted thinking through cognitive therapy, an individual develops skills to modify beliefs and thinking patterns that cause distress (Beck 1976).

In correctional settings, the most common intervention that utilizes cognitive therapy techniques is Cognitive Behavioral Therapy (CBT). CBT interventions involve the use of both cognitive and behavioral methods in rehabilitating offenders. Under the CBT model, an offender is taught to identify and restructure distorted cognitions and develop social skills. To accomplish these goals, a therapist will encourage cognitions that result in positive actions (a cognitive approach) and reinforce positive actions (a behavioral approach) (Milkman and Wanberg 2007). This section of the chapter will focus on the cognitive aspects of CBT.

CBT: Cognitive Components

Practitioners delivering CBT interventions generally focus on two key cognitive elements: automatic thoughts and core beliefs (e.g., Beck 1976; Beck 1979; Burns 1989; Ellis and Harper 1975). Automatic thoughts, also described as "thought habits" (Wanberg and Milkman 1998, 2006), are defined as cognitions that arise instantaneously and unconsciously in response to an outside event (e.g., Beck 1976, 1995, 1996; Freeman et al. 1990; Milkman and Wanberg 2007). Cognitive theorists have identified three types of automatic thoughts: expectations, appraisals, and attributions.

Expectations are cognitions that specific actions will bring about certain results. One type of expectation—efficacy expectation—is particularly relevant to offenders. Efficacy expectations are cognitions about behavioral choices that occur in the face of impending circumstances (Milkman and Wanberg 2007). For instance, if an offender escapes arrest by running from the police, her efficacy expectation in that behavior will be reinforced and she will likely choose to run from police in future similar situations.

An appraisal occurs when an individual evaluates the value of his or her current experiences and reactions to those experiences. Appraisals can often be a source of biased thinking and tend to cause subsequent emotions (Beck 1996). For example, a person with major depressive disorder who is turned down for a job might experience a distorted appraisal such as "I'm worthless," which in turn leads to a feeling of sadness.

Attributions are cognitions about why events occur or why certain actions led to certain results. An individual's belief about the source of his or her own achievements or difficulties arises from attributions (Rotter 1966). For instance, after committing a crime, an offender might think, "I am responsible for robbing that store," demonstrating an internal locus of control. Alternatively, an offender might harbor an external locus of control and think, "If the store had better security, I would not have tried to rob it" (Rotter 1966).

Core beliefs, or underlying assumptions, refer to an individual's long-term thought processes (Seligman et al. 2001). Individuals are generally less conscious of core beliefs than automatic thoughts, and core beliefs tend to be more constant and lasting than automatic thoughts (Seligman et al. 2001). Beck defined core beliefs as schemas that form an individual's automatic cognitions (Beck 1996). Core beliefs tend to guide how an individual interprets and appraises external situations (Milkman and Wanberg 2007). Cognitive therapy is intended to help an individual restructure core beliefs that are distorted or irrational.

Criminal Thinking

Research has shown that cognitive interventions are particularly appropriate for justice-involved individuals. Indeed, CBT is considered one of the most effective treatment options for criminal offenders. Repeat offenders are more prone to experience irrational cognition and engage in what is known as "criminal thinking." According to some (e.g., Walters 2002; Yochelson and Samenow 1976), criminal thinking consists of distorted cognitions that include self-justification, displacement of blame, poor moral reasoning, dominance and entitlement, incorrect interpretations of social cues, and overly optimistic perceptions of reality (see Beck 1999; Lipsey et al. 2007; Walters and White 1989; Yochelson and Samenow 1976). These biased thinking habits may lead an offender to perceive harmless situations as threatening. For instance, an offender may interpret an entirely benign comment as rude or intentionally aggressive (Lipsey et al. 2007). Additionally, offenders engaging in these maladaptive thinking patterns often feel a need for instant gratification, confusing wants with needs. For instance, an offender carrying no money might see a CD in a store and think to himself "I want that CD, so I need to have it right now."

Another tenet of criminal thinking involves the "victim stance," which is a belief that one is being unfairly blamed and rejected by society without reason. This involves a failure to understand that the rejection and blame experienced may be due to one's own antisocial behavior (Lipsey et al. 2007). Many offenders may feel unfairly rejected and adopt a "victim stance" because they were raised within a subculture where such antisocial thought patterns were in fact adaptive. For instance, in a prison or street culture environment, cognitions that would otherwise seem distorted ("if someone is rude to me, I must physically punish him or her, or I will not be respected") may indeed be the best way to survive (Lipsey et al. 2007).

Furthermore, research highlights that offenders often commit "thinking errors" (Barriga et al. 2000; Elliot and Verdeyen 2002; Samenow 1984) and maintain antisocial core beliefs and values (Jennings et al. 1983; Kohlberg 1976). Moreover, the cognitive skill set of offenders is often limited (Andrews and Bonta 2010; Gendreau et al. 1996; Ross and Fabiano 1985). Research has shown that cognitive interventions, and CBT treatments in particular, have been effective in rehabilitating offenders who display such cognitive patterns.

Key Elements of Cognitive Interventions for Offenders

An important assumption of the CBT interventions delivered in a correctional setting is that an offender's distorted thinking is learned (Lipsey et al. 2007). As such, the goal of most CBT interventions employed in correctional contexts is to teach offenders how to recognize the thought processes that led to their criminal behavior (Lipsey et al. 2007).

With an aim of helping offenders hold themselves accountable, the cognitive intervention is generally delivered in a series of steps. First, the therapist helps the offender recognize and self-monitor automatic thoughts. Second, offenders are taught to identify distorted, biased, or irrational thinking patterns and core beliefs. Third, the therapist helps the offender develop techniques to restructure those distorted, biased, or irrational automatic thoughts and core beliefs, through cognitive restructuring (Beck 1995; Dozois and Dobson 2001; Freeman et al. 1990; Leahy and Neary 1997). To successfully deliver such cognitive interventions in a correctional setting, therapists rely on several techniques, including cognitive skills training, cognitive restructuring, and anger management. In addition, therapists will employ supplementary techniques such as relapse prevention, social skills development, and morality training (Lipsey et al. 2007).

Cognitive Skills Training. Cognitive skills training consists of teaching offenders various thinking skills, including interpersonal problem solving, abstract thinking, critical reasoning, causal thinking, goal setting, long-term planning, and perspective taking (Lipsey et al. 2007; Robinson 1995). Therapists often instill these techniques in offenders by engaging in role-play scenarios. Additionally, offenders will be asked to use these cognitive skills in real-life situations that would ordinarily yield distorted thought processes and criminal behavior (Lipsey et al. 2007). This training is aimed at providing offenders with decision-making strategies such as to stop and think prior to acting, come up with alternative resolutions, and consider the consequences of their behavior (Lipsey et al. 2007; Porporino et al. 1991; Robinson 1995).

Cognitive Restructuring. Cognitive restructuring is used to modify distorted or inaccurate cognitive processes that contribute to criminal thinking. Therapists may deliver cognitive restructuring in a variety of forms (Milkman and Wanberg 2007). The "self-talk" cognitive restructuring method consists of stopping distorted thought processes and restructuring maladaptive thinking by planting positive thoughts (McMullin 2000). Other cognitive restructuring interventions focus on problem solving (D'Zurilla and Goldfried 1971; D'Zurilla and Nezu 2001), mood management skills (Beck 1976; Monti et al. 1995), critical reasoning (Ross et al. 1986), and rationally responding to, de-catastrophizing, and scaling emotions (Reinecke and Freeman 2003).

Anger Management. Anger management training entails teaching offenders specific cognitive skills for circumstances likely to cause an angry reaction. To teach these skills, a therapist helps the offender identify automatic thoughts that arise in these situations. Then the therapist helps the offender assess whether those

thoughts are rational. Once irrational thoughts are identified, the therapist and offender work together to replace them with more adaptive ones (Lipsey et al. 2007).

Anger management may also be taught through stress inoculation training (Meichenbaum 1975). In stress inoculation training, offenders are taught to deal with stressful situations by first identifying environmental "triggers" that result in an angry response. Offenders then develop self-statements to use when facing these cues. Such statements (e.g., "Relax, this is not that big of a deal" or "This is not worth losing my temper over") help offenders reframe the situation. Relaxation techniques are also taught as part of stress inoculation training so offenders learn to calm themselves mentally and physically in stressful situations. Stress inoculation training also involves role-play between the therapist and offender so offenders can practice these techniques (Beck and Fernandez 1998; Lochman and Lenhart 1993).

Supplementary Techniques. In addition to the primary cognitive skills training and anger management techniques, CBT interventions often incorporate various supplemental components. These auxiliary techniques may include social development training, moral reasoning education, and relapse prevention skills instruction (Lipsey et al. 2007).

To help offenders develop social skills, therapists will focus on replacing antisocial attitudes and feelings with more prosocial alternatives. Additionally, as part of the social skills training, offenders will often be encouraged to reduce or eliminate any antisocial relationships or associations they may have (Andrews and Bonta 2010).

Moral reasoning education may consist of training offenders to be honest, develop moral accountability in terms of their beliefs, attitudes and behavior, and cultivate respect for the well-being of others and societal rules (Little and Robinson 1986). Additionally, to help an offender develop moral reasoning skills, he or she may be exposed to a moral dilemma and then asked to engage in a discussion about how to handle that dilemma (Goldstein and Glick 1987, 1994). Additionally, some interventions strive to help offenders understand how their previous actions affected their victims (Lipsey et al. 2007).

Relapse prevention training consists of teaching offenders to develop self-management and self-control skills to use in situations that could lead to criminal behavior (Milkman and Wanberg 2007; Marlatt et al. 2002). After developing these skills, offenders should be able to identify high-risk circumstances and use coping skills to prevent criminal relapses (Little and Robinson 1986).

Primary CBT Interventions Used in Correctional Settings

Multiple empirically based CBT programs are used to rehabilitate justice-involved individuals. Below are descriptions of five prototypical CBT programs commonly used in correctional settings.

Reasoning and Rehabilitation. Reasoning and Rehabilitation (R&R) (Ross and Fabiano 1985) is an evidence-based CBT intervention designed to help youths and adults who have antisocial tendencies and exhibit criminal behavior. R&R consists of exercises that change offender thinking that is impulsive, illogical or rigid, and teach them to think of alternative ways of responding that lessens the adverse impact on others, particularly victims. The program consists of 35 structured 2 h sessions for groups consisting of between 6 and 12 individuals (Ross et al. 1988).

Aggression Replacement Training. Aggression Replacement Training (Goldstein and Glick 1987, 1994) is an empirically supported CBT intervention geared toward justice-involved youth with aggression control problems. Aggression Replacement Training consists of three components: Social Skills Training, Anger Control, and Moral Reasoning Education. Social Skills Training, generally delivered through role playing and modeling, teaches offenders to replace antisocial tendencies with prosocial behaviors. Through such training, offenders learn self-control by recording anger-arousing experiences, identifying "triggers," and applying anger control techniques. The Moral Education component consists of exposing offenders to ethical dilemmas and leading a discussion aimed at developing moral reasoning (Goldstein and Glick 1987, 1994).

Thinking for a Change. Thinking for a Change (T4C) (Bush et al. 1997) is a CBT intervention designed for small groups of individuals in a variety of correctional settings, including prisons, jails, probation, and parole supervision. T4C consists of 22 sessions aimed to help participants learn cognitive restructuring skills, problem-solving techniques, and social skills. Each session is comprised of group exercises and homework designed to assist participants develop these skills (Bush et al. 1997).

Cognitive Interventions Program. The Cognitive Interventions Program (CIP) (National Institute of Corrections 1996) consists of 30 sessions designed to deliver a cognitive restructuring curriculum. The program aims to teach offenders to recognize that their behaviors result directly from the choices they make. The lessons help participants recognize distortions and errors in their cognitions, such as victim stance, overoptimism, and a lack of empathy. The program also helps offenders identify antisocial attitudes that may influence their choices and teaches prosocial thinking styles (National Institute of Corrections 1996).

Effectiveness of CBT Interventions for Offenders

A review of the literature on offenders' rehabilitation reveals many beneficial effects of cognitive approaches (Cullen and Gendreau 1989; Gendreau and Ross 1987; Husband and Platt 1993; Landenberger and Lipsey 2005; Wilson et al. 2005). Indeed, research has shown that most effective interventions involve treatment that focuses on the improvement of cognitive functions (Gendreau and Andrews 1990).

One meta-analysis revealed that CBT interventions are critical in delivering effective correctional treatment to adult and juvenile offenders (Andrews et al. 1990 (*k* "intervention appropriateness" versus sanctions comparisons = 154, drawn from 80 studies). Reviews have also shown that cognitive-behavioral programs in particular tend to be the most effective form of rehabilitation for offenders (Allen et al. 2001; Andrews et al. 1990; Cullen and Gendreau 1989; Gendreau and Andrews 1990; Gendreau and Ross 1987; Husband and Platt 1993; Kenne 2011; Losel 1995; MacKenzie and Hickman 1998).

Multiple meta-analyses have demonstrated the effectiveness of CBT interventions in criminal justice settings for both adults and juveniles (e.g., Lipsey and Cullen 2007). In one review of group-structured CBT programs for offenders (*k* studies = 20), researchers found that CBT interventions effectively reduced the criminal behavior of participating offenders (Wilson et al. 2005). Wilson et al. (2005) also identified specific aspects of CBT interventions that were particularly effective, finding that therapy focused on moral reconation, cognitive restructuring, and cognitive skills led to lower recidivism rates. Another meta-analysis of research studies comparing behavioral and cognitive-behavioral interventions (*k* behavioral programs and cognitive-behavioral programs combined = 69) found cognitive-behavioral treatments more effective in terms of reducing recidivism rates (Pearson et al. 2002).

Several meta-analyses dedicated solely to CBT interventions for offenders have also demonstrated the overall effectiveness of such programs in terms of reducing recidivism (Landenberger and Lipsey 2005 (*k* CBT studies = 58); Lipsey et al. 2001 (*k* cognitive-behavioral-program studies = 14); Pearson et al. 2002; Tong and Farrington 2006 (*k* Reasoning and Rehabilitation evaluation studies = 16, from 26 comparisons). One of these meta-analyses found that the CBT interventions reduced offender recidivism—and that the decrease in recidivism was primarily due to the CBT interventions rather than the solely behavioral techniques (Pearson et al. 2002). Another found that, after controlling for various methodological variables, CBT treatment programs that included any one-on-one treatment, anger control, or cognitive restructuring were significantly associated with better recidivism outcomes in bivariate analyses (Landenberger and Lipsey 2005). Other CBT elements (cognitive skills, interpersonal problem solving, social skills, moral reasoning, victim impact, substance abuse, behavioral modification, and relapse prevention) did not show a significant bivariate relationship with effect size. However, in a multivariate analysis (also comprised of methodological controls, participant risk level, amount of treatment, quality of treatment, and whether a program emphasized CBT or not), only anger control and interpersonal problem-solving elements were significantly and positively associated with outcome, while victim impact and behavioral modification were both significantly negatively related to effect size. Landenberger and Lipsey (2005) also examined their sample of studies in terms of the name-brand CBT that was used (Reasoning and Rehabilitation, Moral Reconation Therapy, Aggression Replacement Therapy, Interpersonal Problem-Solving Therapy, Thinking for a Change, programs focused on substance abuse, other manualized programs, all others programs). They found that none of

the name-brand programs stood out from the pack—i.e., none were significantly associated with effect size in bivariate or multivariate analyses. To summarize, Landenberger and Lipsey's (2005) primary findings relevant to this section of the chapter were that (a) anger management training, in particular, showed a robust relationship with better recidivism outcomes, and (b) no name-brand programs were distinguishable from the others in terms of larger reductions in recidivism.

Future Directions

With the growing incarceration rate, continued problem of criminal recidivism, and public funding of rehabilitation for offenders, the importance of analyzing the effectiveness of offender rehabilitation interventions is clear. Current research supports the effectiveness of cognitive interventions, but additional study is needed to clarify what works in correctional contexts. Such research will allow practitioners to tailor interventions to meet the needs of specific offender populations.

Some studies have examined the effects of CBT interventions in relation to various factors, such as offender risk level and correctional setting (e.g., Tong and Farrington 2006), but additional research in these areas would be useful. To deliver an intervention most effectively, a clinician must know the techniques that work best for high-risk versus low-risk offenders. Additionally, interventions need to be considered in correctional context, as offenders may be in maximum security prisons, rehabilitation centers, or under supervision in the community. Moreover, studies should explore the relationship between the effectiveness of a cognitive intervention and other variables, such as previous recidivism rates, socioeconomic status, age, and IQ level.

Some evidence has shown that race and gender may influence the effectiveness of a CBT intervention (Kenne 2011), but additional research is needed to clarify the extent of these relationships. The findings of such research would likely be useful in developing and disseminating interventions tailored to specific offender populations. Such a nuanced approach would help practitioners develop more effective interventions for offenders and potentially further reduce recidivism rates (Kenne 2011).

Finally, some have criticized the quality of the current research examining the extent to which certain interventions lead to positive change among offenders (Telander 2005). These criticisms note the lack of random sampling and inadequate sample sizes in many of the published studies. As such, future researchers should aim to obtain adequately sized samples, and use appropriate treatment and control groups.

Problem-Solving Interventions

In this section, we review problem-solving deficits and related interventions among offender populations. Our coverage is limited to deficiencies and remedies of offenders' *personal* problem-solving skills, at the level of cognitions, affect, and behavior. We do not address problem-solving courts (also known as specialty or treatment/therapeutic courts), such as drug courts, mental health courts, and veteran courts. These types of courts seek to apply legal leverage to engage preselected defendants in interdisciplinary treatment for psychosocial problems related to a court's specialty area, which are thought to underlie eligible court participants' criminal behavior (Daicoff and Wexler 2003; Griffin et al. 2015; Wiener and Brank 2013). Although these courts fall outside the scope of this section, it should be noted that specialty court referrals to treatment often involve interventions that target defendants' personal problem-solving deficits.

Nature of the Intervention

There are two major strands in the offender problem-solving literature (McGuire 2005a; McMurran 2005). The first is the *training* strand from correctional psychology, characterized by "name-brand" programs often based on the interpersonal cognitive problem-solving model (e.g., Spivack et al. 1976). One such program is *Reasoning and Rehabilitation* (R&R), a widely disseminated, manualized, multifaceted intervention program for offenders that includes training in social problem solving (Ross and Ross 1995; D'Zurilla and Nezu 2007). The second is the *therapy* strand, which arises out of the social problem-solving model from clinical psychology (e.g., D'Zurilla and Goldfried 1971). Examples include Problem-Solving Therapy for sex offenders (e.g., Nezu et al. 2005a) and the *Stop & Think* program for offenders with personality disorders (e.g., McMurran et al. 2001b).

Different problem-solving programs, and problem-solving components of more comprehensive intervention programs, have been developed to address the needs of different offender populations. These programs/components vary somewhat in their duration, intensity, format, level of emphasis and elaboration, and content. McGuire (2005a) discusses some of these differences. Generally, however, all of these programs share a common presumption that poor problem solving is associated with psychosocial adjustment problems, including offending behavior. All problem-solving training approaches therefore seek to help offenders develop skills for responding more adaptively to problems in their lives and, hopefully, avoid reoffending as a result.

Regarding treatment targets, Problem-Solving Therapy and the social problem-solving model, for instance, conceptualize a positive versus negative overall orientation to problems, and different problem-solving styles (rational/planful, impulsive/careless, and avoidant) (D'Zurilla and Nezu 2007; Nezu

et al. 2009). More adaptive functioning is associated with a positive problem orientation—a general tendency to perceive problems as personally solvable challenges, and to commit to expending the time and effort to address versus avoid problems. Obstacles to adopting a positive outlook on problems include low self-efficacy beliefs, negative thinking, and negative emotions. Furthermore, both greater adaptive functioning and a positive problem orientation are associated with a rational/planful problem-solving style—the effective problem-solving skills of accurately defining/formulating problems, generating numerous potential solutions, making decisions based on pros and cons of various alternative solutions, and implementing and monitoring a solution. As for intervention techniques, therapeutic/training programs in problem solving incorporate a variety of cognitive-behavioral change strategies, including functional analysis, psychoeducation, practice and feedback, self-monitoring, training in affect regulation, and use of cognitive restructuring techniques (McGuire 2005a). Problem-solving therapy/training appears to occupy an intermediate position on a continuum ranging from cognitively oriented therapies (cognitive therapy, schema-focused therapy) to behaviorally oriented therapies (self-instructional training, social skills training, behavior therapy, behavior modification) (McGuire 2005a).

Empirical Research

In their review of the empirical literature on social problem solving and adjustment, D'Zurilla and Nezu (2007) included studies on offending behavior. They summarized the research findings among adolescents as follows:

- First, adolescents demonstrated less effective problem solving than their parents;
- Second, a negative problem orientation among adolescents was associated with aggression, an impulsive problem-solving style with delinquency, and an avoidant style with aggression and delinquency;
- Third, poorer social problem-solving skills were associated with increased problem behaviors (drug use, delinquency, running away, and unprotected sex) among high-risk (delinquent, runaway, or disadvantaged) teenagers; and
- Fourth, youthful offenders with heroin use disorders performed less effectively on a problem-solving measure than nonaddicted youth offenders (Greening 1997; Jaffe and D'Zurilla 2003; Leadbeater et al. 1989; Platt et al. 1973; for a review of a few additional studies of delinquent youths' problem solving, see Antonowicz and Ross 2005 and McGuire 2005a).

Researchers have also examined social problem-solving abilities in aggressive versus nonaggressive men with mild intellectual disabilities, concluding that more aggressive individuals had greater problem-solving deficits (Basquill et al. 2004). The aggressive participants also identified interpersonal intent less accurately and generated aggressive solutions more frequently.

With respect to adult offenders, high neuroticism has been related to poor problem solving in a sample of offenders with mental illnesses (including personality disorders) (McMurran et al. 2001a). Other researchers investigated social problem solving in a sample of offenders convicted of child sex offenses (Nezu et al. 2005b, c). Child sexual offenders differed from the general population with respect to negative problem orientation and impulsive/careless problem-solving style, both of which were also related to self-reported sexual deviance. In contrast, only scores on a scale of avoidant problem-solving style added unique predictive validity (beyond demographics and prior abuse as a child) to a clinician-rated measure of sexual aggression.

Antonowicz and Ross (2005) noted two studies that found limited problem-solving skills among inmates with poor adjustment to prison (Higgins and Thies 1981; Zamble and Porporino 1988). Consistent with this finding, other researchers have observed that among young offenders, poorer social problem-solving abilities in young offenders were associated with increased distress and suicidality, and more victimization by bullies (Biggam and Powers 1999a–c). Adult prisoners on a special unit for emotionally distressed persons evidenced poorer social problem solving relative to a comparison group drawn from the general offender population (Hayward et al. 2008). A negative problem orientation has also been found to predict self-reported depression and anxiety in adult prisoners (McMurran and Christopher 2009). Finally, McGuire (2005a) interpreted the results of a study by Zamble and Quinsey (1997) as indicating that poor problem solving often preceded recidivism in offenders with extensive criminal histories.

Since the McMurran and McGuire (2005) and D'Zurilla and Nezu (2007) reviews, a small number of new nonintervention studies have been published on offenders' problem-solving abilities. The studies examined the psychometrics of short and long versions of the Social Problem-Solving Inventory–Revised (SPSI–R; D'Zurilla et al. 2002). Both found the measure to be sufficiently reliable and valid to support its use with the respective populations studied—sexual offenders (Wakeling 2007) and offenders with intellectual disabilities (Lindsay et al. 2011). In a sample of untreated sexual offenders, Barnett and Wood (2008) found that participants reported an overall average current problem-solving ability on the SPSI–R. They described a need for future studies to evaluate whether sexual offenders use their problem-solving skills toward prosocial ends (to guard against antisocial tendencies).

D'Zurilla and Nezu (2007) also reviewed outcome studies of problem-solving interventions for offenders, frequently summarizing relevant chapters from an earlier review (McMurran and McGuire 2005). They discussed four intervention programs: *R&R*, *Think First*, *Stop & Think*, and *Project CBT/STOP*. *R&R* has been the most extensively studied problem-solving program for offenders; Antonowicz (2005) identified 22 studies of varying methodological quality that evaluated *R&R* implementations in institutional and community settings. Excluding studies with single-group designs, the majority of between-subjects studies (11 out of 18) lent support to *R&R*'s effectiveness for reducing recidivism, while the remaining 7 produced mixed results. Quantitative reviews of *R&R* have produced consistent

results. Based on a sample of seven *R&R* studies, Pearson et al. (2002) reported a 26 % reduction in recidivism for program participants relative to controls. Subsequently, Tong and Farrington (2006) reported a weighted mean odds ratio of 1.16 for reconvictions based on 16 controlled or quasi-controlled studies (yielding 26 comparisons), or a 14 % overall decrease in recidivism among *R&R* participants compared to controls. Additional moderator analyses supported the effectiveness of the program in institutional and community settings, as well as for low- and high-risk offenders. Another meta-analysis of CBT interventions for offenders, which included name-brand programs as a moderator, found that *R&R*'s effectiveness was comparable to other name-brand and generic CBT programs [Landenberger and Lipsey 2005; Lipsey et al. 2007 (*k* studies of name-brand programs = 58)].

The next program reviewed by D'Zurilla and Nezu (2007), *Think First*, had not been subjected to a randomized controlled trial at the time of their review. However, the few repeated measures studies, summarized by McGuire (2005b), were promising with respect to short-term change on many relevant psychological measures, including measures of social problem solving, criminal thinking, and impulsivity (McGuire and Hatcher 2001; Ong et al. 2003; Steele 2002a). A more recent study that used a pre-post design found that completion of *Think First* improved impulsivity levels, criminal thinking styles, locus of control, and some aspects of social problem-solving ability, although an unexplained increase in impulsive/careless problem-solving style was also observed at the end of treatment (Burgoyne and Tyson 2013).

McGuire (2005b) also reviewed follow-up recidivism studies that used matched-group designs. The first follow-up study found that program-completing probationers performed poorly compared to nontreated prisoners (Debidin and Lovbakke 2005; Stewart-Ong et al. 2004). However, subsequent research has produced more promising results. One study found that program-completing probationers had lower reconviction rates than non-completers and probationer controls, especially completers who originally met selection criteria for the program (Steele 2002b). Another study found that the program had a large effect on reconviction rates for program-completing probationers versus both non-completers and those who were referred to the program but never started it (Stewart-Ong et al. 2004). Subsequent work that considered risk for recidivism found group differences on reconviction rates at up to 18-months follow-up, and also that risk moderated the association between program completion and reconviction (Roberts 2004). A large retrospective evaluation of the program found that, controlling for demographics, risk, and offense type, completing the program was associated with a 29 % reduction in reconviction compared to non-completers and probationer controls, while failing to complete the program was associated with a 22 % increase in reconvictions relative to program completers and probationer controls (Hollin et al. 2002). Research on attrition from *Think First* has suggested that the program may require an overly demanding reading level (Davies et al. 2004), and that compared to program completers, non-completers tended to have shorter criminal histories, were less likely to accept responsibility for their offending, reported stress as a

problem less often, and more frequently acknowledged problems with self-esteem (Westmarland et al. 2002).

The third program reviewed by D'Zurilla and Nezu (2007), *Stop & Think*, had yielded little empirical data by 2007. McMurran et al. (2005) reported both pilot data and preliminary data from a larger study that showed improvements in overall social problem solving and certain problem-solving styles (e.g., impulsivity) among offenders with mental illnesses or personality disorders participating in the program. More recent research on *Stop & Think* has found that treatment completers tended to have greater rational problem-solving styles and lower impulsive/careless styles compared to treatment non-completers (McMurran et al. 2008). Another study found pre-post differences supporting the effectiveness of the program for reducing emotional distress among adult prisoners on a special mental health unit (Hayward et al. 2008).

Finally, D'Zurilla and Nezu (2007) described a demonstration program for sexual offenders with intellectual disabilities called Project CBT/STOP, which consisted of Problem-Solving Therapy combined with other CBT approaches (Nezu et al. 2005a, b). A single-group pre-post evaluation of the program (Nezu et al. 2005c, 2006) found an increase in adaptive behavior and motivation for participants. Positive trends were also seen for pre-post changes in clinical target behaviors, and the posttreatment recidivism rate over a 3-year outcome period was 4 %.

Research conducted since the McMurran and McGuire (2005) and D'Zurilla and Nezu (2007) reviews has found that completing either *R&R*, an abbreviated and modified version of *R&R* (*Enhanced Thinking Skills*), or *Think First* was not associated with a reduction in reconviction compared to program non-completers, referrals who did not start the programs, and offenders who were not assigned to any programs (McGuire et al. 2008). However, in stratifying the groups by risk level for non-participation/non-completion, a small treatment effect was found for moderate- and high-risk cases. Furthermore, a larger evaluation of the three programs found that each was associated with a similar reduction in recidivism for program completers versus nonstarters, non-completers, and non-referrals (Hollin et al. 2008). Another analysis of these programs found that risk of recidivism was associated with non-participation/non-completion (Palmer et al. 2009). Although very high-risk individuals were more likely to fail to follow up on a referral or drop out of treatment, a large recidivism treatment effect was observed when these offenders completed one of the programs—while no treatment effect was observed for low-risk individuals. Similar findings had been reported earlier with a larger sample (Palmer et al. 2008). Finally, among female offenders, completion of *Think First* or *Enhanced Thinking Skills* was not associated with a reduction in recidivism compared to a non-referral comparison group, although non-completers had a higher rate of recidivism relative to the comparison group (Palmer et al. 2015).

In addition to the programs reviewed thus far, Black et al. (2008) reported the results of a small pilot study of a 20-week supplemental group treatment for incarcerated female offenders diagnosed with borderline personality disorder, which included didactic sessions on problem-solving skills. The program was associated with medium to large effect sizes for relevant mental health outcomes (disorder

severity, negative affectivity, and depression), although the researchers did not isolate the effects of the program's problem-solving components. Similar results were obtained in a subsequent study using a similar but larger sample, in addition to new findings that the program was associated with reduced suicidal behavior and disciplinary infractions—and that baseline symptom severity was negatively related to improvement in the program (Black et al. 2013). In another small pilot study of a treatment program based on the social problem-solving model for offenders with intellectual disabilities, Lindsay et al. (2011) reported positive treatment effects on problem orientation and problem-solving style using a multiwave study design. A brief problem-solving intervention was also evaluated in male and female diverted and incarcerated samples (Spiropoulos et al. 2005). Relative to corresponding comparison groups, many of the treated groups showed reductions in correctional misconducts and depression scores, although no effects were observed on measures of conflict and employment.

Rather than focusing only on specific name-brand CBT programs for offenders, Landenberger and Lipsey (2005) and Lipsey et al. (2007) meta-analyzed the effects of specific CBT elements included in various treatment programs. In a multivariate model that included methodological controls, risk level, treatment duration and quality, whether CBT was emphasized, and other CBT elements (cognitive skills, cognitive restructuring, social skills, moral reasoning, victim impact, substance abuse, behavior modification, relapse prevention, and individual attention), they observed that, of the CBT elements, larger reductions in recidivism were associated only with programs that included attention to interpersonal problem solving or anger control. In a similar multivariate model that examined interventions at the level of the named type of CBT that was used, *R&R* and "Interpersonal Problem Solving" performed comparably to all of the other CBT protocols that were examined (Moral Reconation Therapy, Aggression Replacement Therapy, Thinking for Change, and substance abuse focused programs).

Research Gaps/Areas for Future Research

McMurran (2005) has identified a number of future directions for research on problem solving and offending. Her suggestions included focusing on individual differences in social problem-solving styles, and how these differences develop and relate to personality traits, information processing, and offending. She also recommended that researchers explore the links between social problem solving and emotion, examining constructs such as affect regulation and emotional intelligence. In addition, she suggested that concepts from cognitive therapy, such as automatic thoughts and cognitive schemas, might influence social problem solving. As such, it might be beneficial to examine these constructs as part of research on social problem solving. Likewise, she suggested investigating the influence of cognitive therapies for personality disorders, such as schema therapy, on social problem solving. Finally, she recommended improving the measurement of social problem

solving in offenders, given the problems with the reading level and self-awareness required for self-report process measures like the SPSI–R, and with the subjectivity and limited external validity of outcome measures such as the Means–End Problem-Solving procedure.

Since 2005, research has (1) investigated measures such as the SPSI–R in offender samples; (2) documented the social problem-solving profiles of different types of offenders; (3) investigated the links between social problem-solving skills and constructs from offender rehabilitation theories (e.g., primary good/needs from the Good Lives Model; e.g., Ward et al. 2012); (4) examined the relationship between social problem solving and emotional adjustment of offenders while incarcerated and evaluated outcomes for preexisting problem-solving training programs; and (5) developed and evaluated new training programs for social problem solving. Nevertheless, the amount of new research that has been generated since McMurran's (2005) proposed research agenda has been modest. More is needed, particularly on the development of more reliable and valid assessment methods–as well as research that investigates the developmental pathways of social problem solving, and the interactions among affect, cognition, and neurocognitive functioning, personality, and social problem solving. Component and dismantling studies would also be useful for isolating the effect of training in social problem solving versus other treatment targets and strategies.

Behavioral Health Interventions

The following section will consider evidence-based interventions for substance abuse, trauma-related disorders, and serious mental illness (SMI) that have demonstrated effectiveness in reducing associated clinical symptoms and recidivism. As a thorough review of the evidence base for all behavioral health interventions is beyond the scope of this chapter, readers are referred elsewhere (e.g., McMurran 2009; Young and Thome 2011) for such a review.

Substance Abuse

The prevalence of substance abuse among offenders is substantially higher than that of the general population. Current estimates indicate that the prevalence for offenders is between 10 and 48 % for males and between 30 and 60 % for females (Fazel et al. 2006; Lynch et al. 2014). Substance abuse has also been shown to be associated with criminal recidivism (Dowden and Brown 2002). Although there are numerous interventions designed to reduce substance use problems that also have demonstrated criminal justice applications (e.g., motivational interviewing; McMurran 2009; case management; Siegal et al. 2002), the three treatment approaches that will be described here are therapeutic communities, cognitive-behavioral interventions, and "blended approaches" that combine therapeutic community and cognitive-behavioral techniques.

Therapeutic Communities. Derived from the self-help tradition, therapeutic communities (TCs) were initially developed for use with non-correctional and community-based populations (Wexler 1995). As support for prison-based treatment grew, the original TC model was adapted for use in secure settings and is currently one of the most successful in-prison treatment approaches (Prendergast et al. 2003; U. S. Department of Health and Human Services 2005). Although implemented in a residential setting, a number of characteristics distinguish TC programs from those that identify simply as "residential." First, TCs are a "total treatment environment," implemented in isolation from the general prison population (Inciardi et al. 2004, p. 90). Separation from the anxiety, fear, and violence that tend to permeate prison culture provides individuals with an opportunity to begin creating positive change toward a drug free lifestyle (U.S. DHHS 2005). TC programs are highly structured and hierarchical in nature, with an emphasis on improving one's standing in the world, having participants help one another, and actively participating in all community activities. Peers are stratified by level of seniority and are supervised by clinical staff, many of whom are former substance users. Of paramount importance is the recognition that drug use is a disorder of the whole person, and that addiction is one component of a much larger issue (De Leon 1989).

Implementation typically occurs in three stages. Following orientation to the TC rules, residents engage in prison-based individual and group therapy for at least 12 months to further their recovery. The active treatment phase is first followed by work release in a transitional TC setting and then by an aftercare phase in which individuals participate in community-based counseling programs to maintain the progress made in treatment (Inciardi et al. 2004).

The success of TC programming in reducing rates of drug relapse and criminal reoffending has been examined. Meta-analyses [Holloway et al. 2006 (k TC program studies = 7); Mitchell et al. 2012 (k TC program studies = 35)] have supported the effectiveness of TC programs in reducing recidivism and relapse in comparison to other prison-based drug treatment programs (e.g., boot camp, group counseling, narcotic maintenance) and community-based programs such as post-release supervision and drug courts. Results from the Correctional Drug Abuse Treatment Effectiveness (CDATE) project, an extensive systematic review and meta-analysis that examined the effects of programs within 20 intervention categories (k TC program studies = 7), supported the effectiveness of TC programs in reducing recidivism for incarcerated offenders with histories of substance abuse (Pearson and Lipton 1999). Likewise, outcome data from recent controlled trials of TC interventions are consistent with previous meta-analytic findings (Olson and Lurigio 2014). However, the success of TC programming may depend on the outcome variable under consideration. It has been suggested that prison-based drug treatment may exert stronger effects on reducing reincarceration than either rearrest or drug relapse (Welsh and Zajac 2013).

Behavioral and Cognitive-Behavioral Approaches. The underlying theory of cognitive and behavioral interventions and their use with offenders has been described earlier in this chapter. Substance abuse treatment programs in correctional

settings that employ cognitive and behavioral interventions assist offenders in changing criminal beliefs and values, and may utilize systems of reward and punishment to promote prosocial behavior. Such interventions include social skills training, criminal thinking programs, relapse prevention, and contingency contracting (U.S DHHS 2005). Results from the CDATE meta-analysis support the use of cognitive-behavioral interventions with justice-involved substance abusers (Pearson et al. 2002; *k* behavioral and cognitive-behavioral programs combined = 69). However, the effect of combined cognitive-behavioral approaches on recidivism was greater than the effect of solely behavioral interventions.

"Blended" Approaches. TC programs regard substance abuse as the result of disturbed social functioning and personality development, whereas cognitive-behavioral approaches consider substance abuse to be the outcome of prior learning experiences, thoughts, and emotions (Malinowski 2003). However, the two approaches are not incompatible. The Residential Substance Abuse Treatment (RSAT) program, located at the South Idaho Correctional Institution (SICI), has successfully incorporated both cognitive-behavioral and 12-step programming within the context of a TC environment. Cognitive-behavioral components of the program include group process, psychoeducation regarding the nature of the relationship between thinking and behavior, and cognitive restructuring of thinking errors via self-monitoring (Stohr et al. 2001). Since its inception at SICI in 1997, RSAT programming has been implemented within the majority of Idaho prisons (U.S. DOJ 2005) and has been shown to significantly delay time to first rearrest following release from prison (Jensen and Kane 2010).

Trauma-Related Disorders

Trauma has been defined as "any form of interpersonal or domestic physical, sexual, or emotional abuse or neglect, which is sufficiently detrimental to cause prolonged physical, psychological, or social distress to the individual" (Moloney et al. 2009, p. 427). Rates of exposure to trauma are higher among incarcerated populations than in the general population (Messina and Grella 2006). This is compounded by the reality that prison itself can also be traumatizing (Arrigo and Bullock 2008; Wallace et al. 2011). Estimates place the prevalence of PTSD among male and female offenders between 4 and 21 %, with female offenders disproportionately affected (Goff et al. 2007). Indeed, the current prevalence of PTSD within exclusively female samples (48.2 %) is much higher (Zlotnick 1997). The high prevalence of PTSD symptoms is concerning not only from a mental health perspective but from a public safety perspective as well, considering that PTSD is related to an increased risk of reoffending (Ardino et al. 2013). Thus, trauma-informed interventions such as Seeking Safety (see next section) designed to address the complex needs of incarcerated men and women (e.g., high comorbidity of PTSD and substance abuse; Lynch et al. 2014) might be helpful in reducing risk. Recent research has yielded promising results, as discussed next.

Trauma-Informed and Gender-Responsive Therapeutic Communities. At its core, trauma-informed care involves the provision of services that "do no harm" (i.e., that do not inflict further trauma or reactivate past traumatic experiences). Other facets of this approach include training staff to be aware of the impact of trauma and accurately identifying trauma symptoms (Hodas 2006). Utilizing these principles, in conjunction with a gender-responsive curriculum that emphasizes the role that relationships and intimate partners play in women's addiction and recovery (Helping Women Recover; Covington 1999), Messina et al. (2010) examined the effectiveness of a trauma-informed and gender-responsive TC in reducing drug use and rates of reincarceration. In comparison to a standard prison-based TC, women in the gender-responsive condition had greater reductions in drug use and were less likely to have been reincarcerated within 1 year after being released on parole.

Seeking Safety. Seeking Safety (SS) is a present-focused, manualized cognitive-behavioral intervention for individuals with comorbid PTSD and substance abuse (Najavits 2009). The program can be implemented in any clinical setting (e.g., inpatient, outpatient, criminal justice) and is based upon five principles (National Center for Trauma-Informed Care 2008). The first principle involves establishing one's safety, which is defined broadly to include discontinuing drug use, decreasing the frequency of self-harm, and ending abusive relationships. Principles 2 and 3 emphasize the importance of an integrated approach to treating co-occurring PTSD and substance use. Principles 4 and 5 highlight the program's four content areas—cognitive, behavioral, interpersonal, and case management—and clinician processes such as compassion and ensuring that the client has as much control as possible (Najavits n.d.). Treatment components include psychoeducation regarding the relationship between trauma and drug use and 25 cognitive-behavioral and/or interpersonally oriented treatment topics (e.g., Setting Boundaries in Relationships, Asking for Help) that introduce new coping skills (NCTIC 2008; Lynch et al. 2012). Preliminary data support the effectiveness of SS in reducing substance use and symptoms of PTSD in samples of incarcerated women (Lynch et al. 2012; Zlotnick et al. 2003) and a trend for women in SS to be less likely to return to prison over 6 months post-release (Zlotnick et al. 2009). To date, one study has examined the feasibility and preliminary efficacy of implementing SS among male offenders, and it found promising results for substance use and mental health outcomes (Barrett et al. 2015).

Serious Mental Illness

Considering previously noted evidence suggesting that offending is influenced by the presence of mental illness for a small subgroup of offenders, the provision of mental health services for these individuals is warranted on both clinical and risk reduction grounds. Interventions in this section were selected for inclusion in an effort to represent alternatives from both the criminal justice and mental health

models of treatment (Skeem et al. 2011). These interventions, to be discussed next, include Modified Therapeutic Community and Assertive Community Treatment.

Modified Therapeutic Community. Based on the theoretical framework of the TC model, modified therapeutic community (MTC) programs were adapted to meet the needs of individuals with co-occurring substance use and mental illness. MTC programs retain an emphasis on personal responsibility, mutual self-help, and using peers as role models (Sacks et al. 2010). Relative to traditional TCs, MTCs are less intense (i.e., shortened and simplified meetings, fewer activities), allow for greater individualization, and involve smaller caseloads (Sacks et al. 1999). In addition, the MTC contains a medication education component (U.S. DHHS 2005). Results from controlled trials and a recent meta-analysis favor MTC programs over comparison groups in reducing substance use and criminal activity (Sacks et al. 2004, 2010; k studies = 3, with 4 comparisons).

Forensic Assertive Community Treatment. Derived from Assertive Community Treatment (ACT), an intensive community-based treatment that provides care to individuals with mental illness, Forensic Assertive Community Treatment (FACT) is designed to prevent jail detention and reduce criminal recidivism (Morrissey et al. 2007). Program components such as targeting of individuals with prior arrests, use of court sanctions to incentivize participation, and inclusion of probation officers on treatment teams differentiate FACT from ACT (Lamberti et al. 2004). Although the evidence for FACT effectiveness has historically been weak (Morrissey et al. 2007), as it had been limited to a small number of pre-post designs, a recent randomized clinical trial that compared FACT with treatment as usual (TAU) yielded encouraging results (Cusack et al. 2010). At 12 months, FACT participants had fewer jail bookings and hospital stays than did individuals in the TAU condition. This same pattern was seen at 24 month follow-up, highlighting the potential value of providing targeted behavioral health services to criminal justice populations.

Future Directions

Evidence supporting the utility of a variety of behavioral health interventions in reducing clinical symptoms related to substance use, trauma, and severe mental illness, and the impact of these interventions on criminal recidivism, has been discussed in this section. However, our current knowledge on what constitutes best practice is limited by the difficulty in implementing randomized controlled trials (RCTs) in research, and by the absence of sufficient recidivism data.

RCTs are undertaken relatively infrequently within the criminal justice system, and researchers tend to use quasi-experimental designs (Perry et al. 2009). Although there are a variety of ethical, legal, and practical challenges associated with using RCTs with justice-involved individuals, the very limited use of this research design within criminal justice is unfortunate, given the susceptibility of quasi-experimental designs to sources of bias (Farrington and Welsh 2005; Perry

et al. 2009). Increased use of RCTs would strengthen the research base underlying the interventions discussed in this chapter, and improve our ability to draw causal conclusions.

Finally, the empirical investigations described in this section reported accompanying recidivism data, but many studies examining the effectiveness of behavioral health interventions do not. Although it may seem unnecessary to collect recidivism data when the primary goal of most behavioral health interventions is to reduce the number and/or severity of clinical symptoms associated with the disorder in question, we have strongly argued that it is not only necessary but essential when working with justice-involved populations. Collecting such outcome data would allow investigators to determine the clinical and the risk-reducing impacts of various interventions, and facilitate the move toward an integrated model of service delivery that prioritizes both but funds them simultaneously.

Conclusion

This chapter has reviewed the evidence regarding interventions for justice-involved individuals. The discussion concerning the most appropriate interventions for such individuals has insufficiently considered the primary goal of the intervention. In a justice-involved population, it is very important to focus in particular on interventions that have been shown to reduce re-offense risk. Given the apparently high prevalence of behavioral health disorders in this population, it is particularly important to consider the efficiency and value of interventions that can both improve behavioral health and reduce re-offense risk. Future research that improves knowledge regarding such "dually valuable" interventions is clearly indicated. Such research may be guided by the RNR model, which has been shown to be effective in identifying risk-relevant needs and gauging responsivity for the larger population of justice-involved individuals.

References

Allen, L. C., MacKenzie, D. L., & Hickman, L. J. (2001). The effectiveness of cognitive behavioral treatment for adult offenders: A methodological, quality-based review. *International Journal of Offender Therapy and Comparative Criminology, 45*, 498–514.

Andrews, D. (2012). The Risk-Need-Responsivity (RNR) model of correctional assessment and treatment. In J. Dvoskin, J. Skeem, R. Novoaco, & K. Douglas (Eds.), *Using social science to reduce violent offending* (pp. 127–156). New York: Oxford University Press. doi:10.1093/acprof:oso/9780195384642.001.0001

Andrews, D. A., Zinger, I., Hoge, R. D., Bonta, J., Gendreau, P., & Cullen, F. T. (1990). Does treatment work? A psychologically informed meta-analysis. *Criminology, 28*, 369–404.

Andrews, D., & Bonta, J. (2010). *The psychology of criminal conduct* (5th ed.). New Providence, NJ: LexisNexis.

Antonowicz, D. H. (2005). The reasoning and rehabilitation program: Outcome evaluations with offenders. In M. McMurran & J. McGuire (Eds.), *Social problem solving and offenders: Evidence, evaluation and evolution* (pp. 163–182). Chichester, England: Wiley. doi:10.1002/9780470713488.ch9

Antonowicz, D. H., & Ross, R. R. (2005). Social problem solving deficits in offenders. In M. McMurran & J. McGuire (Eds.), *Social problem solving and offenders: Evidence, evaluation and evolution* (pp. 91–102). Chichester, England: Wiley. doi:10.1002/9780470713488.ch5

Ardino, V., Milani, L., & Di Blasio, P. (2013). PTSD and re-offending risk: The mediating role of worry and a negative perception of other people's support. *European Journal of Psychotraumatology, 4*, N. P. doi:10.3402/ejpt.v4i0.21382

Arrigo, B. A., & Bullock, J. L. (2008). The psychological effects of solitary confinement on prisoners in supermax units: Reviewing what we should know and recommending what should change. *International Journal of Offender Therapy and Comparative Criminology, 52*, 622–640. doi:10.1177/0306624X07309720

Bandura, A. (1969). *Principles of behavior modification*. New York: Holt, Rinehart & Winston.

Barnett, G., & Wood, J. L. (2008). Agency, relatedness, inner peace, and problem solving in sexual offending: How sexual offenders prioritize and operationalize their good lives conceptions. *Sexual Abuse, 20*, 444–465. doi:10.1177/1079063208325202

Barrett, E. L., Indig, D., Sunjic, S., Sannibale, C., Sindicich, N., & Mills, K. (2015). Treating comorbid substance use and traumatic stress among male prisoners: A pilot study of the acceptability, feasibility, and preliminary efficacy of Seeking Safety. *International Journal of Forensic Mental Health, 14,* 45–55. doi:10.1080/14999013.2015.1014527

Barriga, A. Q., Landau, J. R., Stinson, B. L., Liau, A. K., & Gibbs, J. C. (2000). Cognitive distortion and problem behaviors in adolescents. *Criminal Justice and Behavior, 27*, 36–56.

Basquill, M., Nezu, C. M., Nezu, A. M., & Klein, T. L. (2004). Aggression-related hostility bias and social problem solving deficits in adult males with mental retardation. *American Journal on Mental Retardation, 109*, 255–263. doi:10.1352/0895-8017(2004)109<255:AHBASP>2.0.CO;2

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.

Beck, A. T. (Ed.). (1979). *Cognitive therapy of depression*. Guilford Press.

Beck, A. T. (1996). Beyond belief: A theory of modes, personality, and psychopathology. In P. M. Salkovskis (Ed.), *Frontiers of cognitive therapy* (pp. 1–25). New York: Guilford.

Beck, A. T. (1999). *Prisoners of hate: The cognitive basis of anger, hostility, and violence*. New York: Harper Collins.

Beck, J. S. (1995). *Cognitive therapy: Basics and beyond*. New York: Guilford.

Beck, R., & Fernandez, E. (1998). Cognitive-behavioral therapy in the treatment of anger: A meta-analysis. *Cognitive Therapy and Research, 22*, 63–74.

Biggam, F., & Power, K. (1999a). A comparison of the problem solving abilities and psychological distress of suicidal, bullied, and protected prisoners. *Criminal Justice and Behavior, 26*, 196–216. doi:10.1177/0093854899026002003

Biggam, F., & Power, K. (1999b). Social problem solving skills and psychological distress among incarcerated young offenders: The issue of bullying and victimization. *Cognitive Therapy and Research, 23*, 307–326. doi:10.1023/A:1018795632067

Biggam, F., & Power, K. (1999c). Suicidality and the state-trait debate on problem solving deficits: A re-examination with incarcerated young offenders. *Archives of Suicide Research, 5*, 27–42. doi:10.1080/13811119908258313

Black, D. W., Blum, N., Eichinger, L., McCormick, B., Allen, J., & Sieleni, B. (2008). STEPPS: Systems training for emotional predictability and problem solving in women offenders with borderline personality disorder in prison—A pilot study. *CNS Spectrums, 13*, 881–886. doi:10.1017/S1092852900016989

Black, D. W., Blum, N., McCormick, B., & Allen, J. (2013). Systems Training for Emotional Predictability and Problem Solving (STEPPS) group treatment for offenders with borderline

personality disorder. *Journal of Nervous and Mental Disease, 201*, 124–129. doi:10.1097/NMD.0b013e31827f6435

Blitz, C., Wolff, N., Pan, K., & Pogorzeiski, W. (2005). Gender specific behavioral health and community release patterns among New Jersey prison inmates: Implications for treatment and community reentry. *American Journal of Public Health, 95*, 1741–1746. doi:10.2105/AJPH.2004.059733

Bonta, J., Blais, J., & Wilson, H. (2013). *The prediction of risk for mentally disordered offenders: A quantitative synthesis*. Public Safety Canada, User Report 2013:01. Retrieved July 14, 2015 from http://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/prdctn-rsk-mntlly-dsrdrd/prdctn-rsk-mntlly-dsrdrd-eng.pdf

Bonta, J., Law, M., & Hanson, K. (1998). The prediction of criminal and violent recidivism among mentally disordered offenders: A meta-analysis. *Psychological Bulletin, 123*, 123–142. doi:10.1037/0033-2909.123.2.123

Burgoyne, B., & Tyson, G. (2013). An evaluation of the 'Think First' program. *Australian & New Zealand Journal of Criminology, 46*, 88–100. doi:10.1177/0004865812469973

Burns, D. D. (1989). *The feeling good handbook*. New York: William Morrow.

Bush, J., Glick, B., & Taymans, J. (1997, Revised 1998). *Thinking for a change: Integrated cognitive behavior change program*. National Institute of Corrections. Washington D.C.: U.S. Department of Justice.

Castillo, E., & Fiftal Alarid, L. (2011). Factors associated with recidivism among offenders with mental illness. *International Journal of Offender Therapy and Comparative Criminology, 55*, 98–117. doi:10.1177/0306624X09359502

Covington, S. S. (1999). *Helping women recover: A program for treating addiction*. San Francisco: Jossey-Bass.

Cullen, F. T, & Gendreau, P. (1989). The effectiveness of correctional rehabilitation. In L. Goodstein & D.L. MacKenzie (Eds.), *The American prison: Issues in research policy* (pp. 23–44). New York: Plenum. doi:10.1300/J020v18n03_09

Cusack, K. J., Morrissey, J. P., Cuddeback, G. S., Prins, A., & Williams, D. M. (2010). Criminal justice involvement, behavioral health service use, and costs of forensic assertive community treatment: A randomized trial. *Community Mental Health Journal, 46*, 356–363. doi:10.1007/s10597-010-9299-z

D'Zurilla, T. J., & Goldfried, M. R. (1971). Problem solving and behavior modification. *Journal of Abnormal Psychology, 78*, 107–126. doi:10.1037/h0031360

D'Zurilla, T. J., & Nezu, A. M. (2001). Problem solving therapies. In K. S. Dobson (Ed.), *Handbook of cognitive-behavioral therapies* (2d ed., pp. 211–245). New York: Guilford.

D'Zurilla, T. J., Nezu, A. M., & Maydeu-Olivares, A. (2002). *Social Problem solving Inventory-Revised (SPSI–R)*. North Tonawanda, NY: Multi-Health Systems.

D'Zurilla, T. J., & Nezu, A. M. (2007). *Problem-solving therapy: A positive approach to clinical intervention* (3rd ed.). New York, NY: Springer.

Daicoff, S., & Wexler, D. B. (2003). Therapeutic jurisprudence. In I. B. Weiner (Editor-in-Chief) & A. M. Goldstein (Vol. Ed.), *Handbook of psychology: Vol. 11. Forensic psychology* (pp. 561–580). doi:10.1002/0471264385.wei1128

Davies, K., Lewis, J., Byatt, J., Purvis, E., & Cole, B. (2004). *An evaluation of the literacy demands of general offending behaviour programmes*. Findings 233. London, England: Home Office Research, Development and Statistics Directorate.

De Leon, G. (1989). Therapeutic communities for substance abuse: Overview of approach and effectiveness. *Psychology of Addictive Behaviors, 3*, 140–147. doi:10.1037/h0080571

Debidin, M., & Lovbakke, J. (2005). Offending behavior programmes in prison and probation. In G. Harper & C. Chitty (eds.), *The Impact of corrections on reoffending: A review of 'what works'* (pp. 31–54). Home Office Research Study 291. London, England: Home Office Research, Development and Statistics Directorate.

Ditton, P. (1999). *Mental health and treatment of inmates and probationers (Bureau of Justice Statistics Special Report NCJ 174463)*. Washington, D.C.: U.S. Department of Justice.

Dowden, C., & Andrews, D. (1999). What works for female offenders: A meta-analytic review. *Crime & Delinquency, 45*, 438–452. doi:10.1177/0011128799045004002

Dowden, C., & Brown, S. L. (2002). The role of substance abuse factors in predicting recidivism: A meta-analysis. *Psychology, Crime, & Law, 8*, 243–264. doi:10.1080/10683160208401818

Dozois, D. J., & Dobson, K. S. (2001). Information processing and cognitive organization in unipolar depression: Specificity and comorbidity issues. *Journal of Abnormal Psychology, 110*, 236–246.

Elliot, W., & Verdeyen, V. (2002). *Game over! Strategies for managing inmate deception*. Lanham, MD: American Correctional Association.

Ellis, A., & Harper, R. A. (1975). *A new guide to rational living*. Englewood Cliffs, NJ: Prentice-Hall.

Eno Louden, J., Manchak, S., O'Connor, M., & Skeem, J. (2015). Applying the sequential intercept model to reduce recidivism among probationers and parolees with mental illness. In P. Griffin, K. Heilbrun, E. Mulvey, D. DeMatteo, & C. Schubert (Eds.), *The sequential intercept model and criminal justice: Promoting community alternatives for individuals with serious mental illness* (pp. 118–136). New York: Oxford.

Farrington, D. P., & Welsh, B. C. (2005). Randomized experiments in criminology: What have we learned in the last two decades? *Journal of Experimental Criminology, 1*, 9–38. doi:10.1007/s11292-004-6460-0

Fazel, S., Bains, P., & Doll, H. (2006). Substance abuse and dependence in prisoners: A systematic review. *Addiction, 101*, 181–191. doi:10.1111/j.1360-0443.2006.01316.x

First, M., Williams, J., Karg, R., & Spitzer, R. (2015). *Structured clinical interview for DSM-5—Research version*. Arlington, VA: American Psychiatric Association.

Freeman, A., Pretzer, J., Fleming, B., & Simon, K. M. (1990). *Clinical applications of cognitive therapy*. New York: Plenum. doi:10.1007/978-1-4684-0007-6

Gendreau, P., & Andrews, D. A. (1990). Tertiary prevention: What the meta-analyses of the offender treatment literature tell us about what works. *Canadian Journal of Criminology, 32*, 173–184.

Gendreau, P., & Ross, R. R. (1987). Revivification of rehabilitation: Evidence from the 1980's. *Justice Quarterly, 4*, 349–407. doi:10.1080/07418828700089411

Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offenders recidivism: What works! *Criminology, 34*, 575–607. doi:10.1111/j.1745-9125.1966.tb01220.x

Goff, A., Rose, E., Rose, S., & Purves, D. (2007). Does PTSD occur in sentenced prison populations? A systematic literature review. *Criminal Behaviour and Mental Health, 17*, 152–162. doi:10.1002/cbm.653

Goldstein, A. P., & Glick, B. (1987). *Aggression replacement training: A comprehensive intervention for aggressive youth*. Champaign, IL: Research Press.

Goldstein, A. P., & Glick, B. (1994). *The prosocial gang: Implementing aggression replacement training*. Thousand Oaks, CA: Sage.

Greening, L. (1997). Adolescent stealers' and nonstealers' social problem solving skills. *Adolescence, 32*, 51–55.

Griffin, P., Heilbrun, K., Mulvey, E., DeMatteo, D., & Schubert, C. (Eds.) (2015). *Criminal justice and the sequential intercept model: Promoting community alternatives for people with severe mental illness.* New York: Oxford. doi:10.1093/med:psych/9780199826759.001.0001

Hanson, R., Bourgon, G., Helmus, L., & Hodgson, S. (2009). The principles of effective correctional treatment also apply to sexual offenders: A meta-analysis. *Criminal Justice and Behavior, 36*, 865–891. doi:10.1177/0093854809338545

Hayward, J., McMurran, M., & Sellen, J. (2008). Social problem solving in vulnerable adult prisoners: Profile and intervention. *The Journal of Forensic Psychiatry & Psychology, 19*, 243–248. doi:10.1080/14789940701752193

Higgins, J. P., & Thies, A. P. (1981). Social effectiveness and problem solving thinking of reformatory inmates. *Journal of Offender Services, Counseling and Rehabilitation, 5*, 93–98. doi:10.1080/10509674.1981.9963670

Hodas, G. R. (2006). *Responding to childhood trauma: The promise and practice of trauma informed care*. Retrieved from http://www.nasmhpd.org/sites/default/files/Responding%20to%20Childhood%20Trauma%20-%20Hodas.pdf

Hollin, C. R., McGuire, J., Hounsome, J. C., Hatcher, R. M., Bilby, C. A. L., & Palmer, E. J. (2008). Cognitive skills behavior programs for offenders in the community: A reconviction analysis. *Criminal Justice and Behavior, 35*, 269–283. doi:10.1177/0093854807312234

Hollin, C. R., McGuire, J., Palmer, E. J., Bilby, C., Hatcher, R., & Holmes, A. (2002). *Introducing pathfinder programmes into the Probation Service: An interim report (Home Office Research Study 247)*. London, England: Home Office.

Holloway, K. R., Bennett, T. H., & Farrington, D. P. (2006). The effectiveness of drug treatment programs in reducing criminal behavior: A meta-analysis. *Psicothema, 18*, 620–629.

Husband, S. D., & Platt, J. J. (1993). The cognitive skills component in substance abuse treatment in correctional settings: A brief review. *Journal of Drug Issues, 23*, 31–42.

Inciardi, J. A., Martin, S. S., & Butzin, C. A. (2004). Five-year outcomes of therapeutic community treatment of drug-involved offenders after release from prison. *Crime & Delinquency, 50*, 88–107. doi:10.1177/0011128703258874

Jaffe, W. B., & D'Zurilla, T. J. (2003). Adolescent problem solving, parent problem solving, and externalizing behavior in adolescents. *Behavior Therapy, 34*, 295–311. doi:10.1016/S0005-7894(03)80002-3

James, D., & Glaze, L. (2006). *Mental health problems of prison and jail inmates (Bureau of Justice Statistics Special Report NCJ 213600)*. Washington, D.C.: U.S. Department of Justice.

Jennings, W. S., Kilkenny, R., & Kohlberg, L. (1983). Moral-development theory and practice for youthful and adult offenders. In W. S. Laufer & J. M. Day (Eds.), *Personality theory, moral development & criminal behavior* (pp. 281–355). New York: Lexington.

Jensen, E. L., & Kane, S. L. (2010). The effect of therapeutic community on time to first re-arrest: A survival analysis. *Journal of Offender Rehabilitation, 49*, 200–209. doi:10.1080/10509671003666594

Junginger, J., Claypoole, K., Laygo, R., & Crisanti, A. (2006). Effects of serious mental illness and substance use on criminal offenses. *Psychiatric Services, 57*, 879–882. doi:10.1176/appi.ps.57.6.879

Kenne, D. R. (2011). Examination of thinking error and the responsivity principle in a cognitive-behavioral intervention for offenders: Implications for criminal justice policy. *Dissertation Abstracts International Section A, 72*, 744.

Lamberti, J. S., Weisman, R., & Faden, D. I. (2004). Forensic assertive community treatment: Preventing incarceration of adults with severe mental illness. *Psychiatric Services, 55*, 1285–1293. doi:10.1176/appi.ps.55.11.1285

Landenberger, N. A., & Lipsey, M. W. (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. doi:10.1007/s11292-005-3541-7

Leadbeater, B. J., Hellner, I., Allen, J. P., & Aber, J. L. (1989). Assessment of interpersonal negotiation strategies in youth engaged in problem behaviors. *Developmental Psychology, 25*, 465–472. doi:10.1037/0012-1649.25.3.465

Leahy, D., & Neary, J. P. (1997). Public policy towards R&D in oligopolistic industries. *American Economic Review, 87,* 642–662.

Lindsay, W. R., Hamilton, C., Moulton, S., Scott, S., Doyle, M., & McMurran, M. (2011). Assessment and treatment of social problem solving in offenders with intellectual disability. *Psychology, Crime & Law, 17*, 181–197. doi:10.1080/10683160903392756

Lipsey, M. W., & Cullen, F. T. (2007). The effectiveness of correctional rehabilitation: A review of systematic reviews. *Annual Review of Law and Social Science, 3*, 297–320. doi:10.1146/annurev.lawsocsci.3.081806.112833

Lipsey, M. W., Chapman, G., & Landenberger, N. A. (2001). Cognitive-behavioral programs for offenders. *The Annals of the American Academy of Political and Social Science, 578*, 144–157. doi:10.1177/0002716201578001009

Lipsey, M. W., Landenberger, N. A., & Wilson, S. J. (2007). Effects of cognitive-behavioral programs for criminal offenders. *Campbell Systematic Reviews, 6*, 1–27.

Little, G., & Robinson, K. (1986). *How to escape your prison: A moral reconation therapy workbook*. Memphis: Eagle Wing Books.

Lochman, K. E., & Lenhart, L. A. (1993). Anger coping intervention for aggressive children: Conceptual models and outcome effects. *Clinical Psychology Review, 10*, 146–148. doi:10.1016/S0272-7358(05)80006-6

Losel, F. (1995). The efficacy of correctional treatment: A review and synthesis of meta-evaluations. In J. McGuire (Ed.), *What works: Reducing reoffending: Guidelines from research and practice* (pp. 79–111). New York: John Wiley.

Lynch, S. M., DeHart, D. D., Belknap, J. E., Green, B. L., Dass-Brailsford, P., Johnson, K. A., et al. (2014). A multisite study of the prevalence of serious mental illness, PTSD, and substance use disorders of women in jail. *Psychiatric Services, 65*, 670–674. doi:10.1176/appi.ps.201300172

Lynch, S. M., Heath, N. M., Mathews, K. C., & Cepeda, G. J. (2012). Seeking Safety: An intervention for trauma-exposed incarcerated women. *Journal of Trauma & Dissociation, 13*, 88–101. doi:10.1080/15299732.2011.608780

MacKenzie, D. L., & Hickman, L. J. (1998). *What works in corrections? An examination of the effectiveness of the type of rehabilitation programs offered by Washington State Department of Corrections (Report to the state of Washington legislature joint audit and review committee)*. College Park, MD: University of Maryland, Department of Criminology and Criminal Justice.

Malinowski, A. (2003). "What works" with substance users in prison? *Journal of Substance Use, 8*, 223–233. doi:10.1080/14659890310001636107

Marlatt, G. A., Parks, G. A., & Witkiewitz, K. (2002). *Clinical guidelines for implementing relapse prevention therapy: A guideline developed for the behavioral health recovery management project*. Seattle, WA: University of Washington Addictive Behaviors Research Center.

McGuire, J. (2005a). Social problem solving: Basic concepts, research, and applications. In M. McMurran & J. McGuire (Eds.), *Social problem solving and offenders: Evidence, evaluation and evolution* (pp. 3–30). Chichester, England: Wiley. doi:10.1002/9780470713488.ch1

McGuire, J. (2005b). The *Think First* Programme. In M. McMurran & J. McGuire (Eds.), *Social problem solving and offenders: Evidence, evaluation and evolution* (pp. 183–206). Chichester, England: Wiley. doi:10.1002/9780470713488.ch10

McGuire, J., Bilby, C. A. L., Hatcher, R. M., Hollin, C. R., Hounsome, J., & Palmer, E. J. (2008). Evaluation of structured cognitive—behavioural treatment programmes in reducing criminal recidivism. *Journal of Experimental Criminology, 4*, 21–40. doi:10.1007/s11292-007-9047-8

McGuire, M., & Hatcher, R. (2001). Offence-focused problem solving: Preliminary evaluation of a cognitive skills program. *Criminal Justice and Behavior, 28*, 564–587. doi:10.1177/009385480102800502

McMullin, R. E. (2000). *The new handbook of cognitive therapy techniques*. New York: W.W. Norton.

McMurran, M. (2005). Social problem solving and offending: Reflections and directions. In M. McMurran & J. McGuire (Eds.), *Social problem solving and offending: Evidence, evaluation and evolution* (pp. 297–307). Chichester, England: Wiley. doi:10.1002/9780470713488

McMurran, M. (2009). Motivation interviewing with offenders: A systematic review. *Legal and Criminological Psychology, 14*, 83–100. doi:10.1348/135532508X278326

McMurran, M., & Christopher, G. (2009). Social problem solving, anxiety, and depression in adult male prisoners. *Legal and Criminological Psychology, 14*, 101–110. doi:10.1348/135532507X267031

McMurran, M., & McGuire, J. (Eds.). (2005). *Social problem solving and offending: Evidence, evaluation and evolution*. Chichester, England: Wiley. doi:10.1002/9780470713488

McMurran, M., Egan, V., & Duggan, C. (2005). Stop & Think! Social problem-solving therapy with personality-disordered offenders. In M. McMurran & J. McGuire (Eds)., *Social problem*

solving and offending: Evidence, evaluation and evolution (pp. 207–220). Chichester, England: Wiley. doi:10.1002/9780470713488.ch6

McMurran, M., Egan, V., Blair, M., & Richardson, C. (2001a). The relationship between social problem solving and personality in mentally disordered offenders. *Personality and Individual Differences, 30*, 517–524. doi:10.1016/S0191-8869(00)00050-7

McMurran, M., Fyffe, S., McCarthy, L., Duggan, C., & Latham, A. (2001b). Stop & Think! Social problem solving therapy with personality-disordered offenders. *Criminal Behaviour and Mental Health, 11*, 273–285. doi:10.1002/cbm.401

McMurran, M., Huband, N., & Duggan, C. (2008). A comparison of treatment completers and non-completers of an in-patient treatment programme for male personality-disordered offenders. *Psychology and Psychotherapy: Theory, Research and Practice, 81*, 193–198. doi:10.1348/147608308X288762

Meichenbaum, D. H. (1975). *Stress inoculation training*. New York: Pergamon Press.

Messina, N., & Grella, C. (2006). Childhood trauma and women's health outcomes in a California prison population. *American Journal of Public Health, 96*, 1842–1848. doi:10.2105/AJPH.2005.082016

Messina, N., Grella, C. E., Cartier, J., & Torres, S. (2010). A randomized experimental study of gender-responsive substance abuse treatment for women in prison. *Journal of Substance Abuse Treatment, 38*, 97–107. doi:10.1016/j.jsat.2009.09.004

Milkman, H., & Wanberg, K. (2007). *A review and discussion for corrections professionals*. Washington, DC: National Institute of Corrections.

Mitchell, O., Wilson, D. B., & MacKenzie, D. L. (2012). The effectiveness of incarceration-based drug treatment on criminal behavior: A systematic review. *Campbell Systematic Reviews, 18*, 1–75. doi:10.4073/csr.2012.18

Moloney, K. P., van den Bergh, B. J., & Moller, L. F. (2009). Women in prison: The central issues of gender characteristics and trauma. *Public Health, 123*, 426–430. doi:10.1016/j.puhe.2009.04.002

Monti, P. M., Rohsenow, D. J., Colby, S. M., &, Abrams, D. B. (1995). Coping and social skills training. In R. K. Hester & W. R. Miller (Eds.), *Handbook of alcoholism treatment approaches: Effective alternatives* (pp. 221–241). Boston: Allyn & Bacon.

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. doi:10.1007/s10597-007-9092-9

Munetz, M., & Griffin, P. (2006). Use of the Sequential Intercept Model as an approach to decriminalization of people with severe mental illness. *Psychiatric Services, 57*, 544–549. doi:10.1176/appi.ps.57.4.544

Najavits, L. M. (2009). Psychotherapies for trauma and substance abuse in women. *Trauma, Violence, & Abuse, 10*, 290–298. doi:10.1177/1524838009334455

Najavits, L. M. (n.d.). *Implementing seeking safety therapy for PTSD and substance abuse: Clinical guidelines*. Retrieved from http://www.bhrm.org/guidelines/PTSD.pdf

National Center for Trauma-Informed Care. (2008). *Models for developing trauma-informed behavioral health systems and trauma-specific services*. Retrieved from http://www.ct.gov/dmhas/lib/dmhas/trauma/TraumaModels.pdf

National Commission on Correctional Health Care. (2002). *The health status of soon-to-be-released inmates: A report to Congress* (Vol. I). Washington, DC: U.S. Department of Justice.

Nezu, A. M., Nezu, C. M., & McMurran, M. (2009). Problem solving therapy. In W. T. O'Donohue & J. E. Fisher (Eds.), *General principles and empirically supported techniques of cognitive behavior therapy* (pp. 500–505). Hoboken, NJ: John Wiley & Sons.

Nezu, C. M., D'Zurilla, T. J., & Nezu, A. M. (2005a). Problem solving therapy: Theory, practice, and application to sex offenders. In M. McMurran & J. McGuire (Eds.), *Social problem solving and offenders: Evidence, evaluation and evolution* (pp. 103–123). Chichester, England: Wiley. doi:10.1002/9780470713488.ch6

Nezu, C. M., Greenberg, J., & Nezu, A. M. (2005b). Project STOP: Cognitive behavioral assessment and treatment for sex offenders with intellectual disabilities. *International Journal of Behavioral Consultation and Therapy, 1*, 191–203. doi:10.1037/h0100744

Nezu, C. M., Nezu, A. M., Dudek, J. A., Peacock, M., & Stroll, J. (2005c). Social problem solving correlates of sexual deviancy and aggression among adult child molesters. *Journal of Sexual Aggression, 11*, 27–36. doi:10.1080/13552600512331329540

Nezu, C. M., Fiore, A. A., & Nezu, A. M. (2006). Problem solving treatment for intellectually disabled sex offenders. *International Journal of Behavioral Consultation and Therapy, 2*, 266–276. doi:10.1037/h0100781

NIC (National Institute of Corrections) (1996). *Cognitive interventions program: Think.* National Institute of Corrections Information Center. Washington D.C.: U.S. Department of Justice.

Olson, D. A., & Lurigio, A. J. (2014). The long-term effects of prison-based drug treatment and aftercare services on recidivism. *Journal of Offender Rehabilitation, 53*, 600–619. doi:10.1080/10509674.2014.956965

Ong, G., Al-Attar, Z., Roberts, C., & Harsent, L. (2003). *Think First: An accredited community-based cognitive-behavioural programme in England and Wales. Findings from the prospective evaluation in three Probation Areas*. Oxford, England: Probation Studies Unit, Centre for Criminological Research, University of Oxford.

Palmer, E. J., Hatcher, R. M., McGuire, J., & Hollin, R. C. (2015). Cognitive skills programs for female offenders in the community: Effect on reconviction. *Criminal Justice and Behavior, 42*, 345–360. doi:10.1177/0093854814552099

Palmer, E. J., McGuire, J., Hatcher, R. M., Hounsome, J. C., Bilby, C. A. L., & Hollin, C. R. (2008). The importance of appropriate allocation to offending behavior programs. *International Journal of Offender Therapy and Comparative Criminology, 52*, 206–221. doi:10.1177/0306624X07303877

Palmer, E. J., McGuire, J., Hatcher, R. M., Hounsome, J. C., Bilby, C. A. L., & Hollin, C. R. (2009). Allocation to offending behavior programs in the English and Welsh Probation Service. *Criminal Justice and Behavior, 36*, 909–922. doi:10.1177/0093854809338889

Pearson, F. S., & Lipton, D. S. (1999). A meta-analytic review of the effectiveness of corrections-based treatments for drug abuse. *The Prison Journal, 79*, 384–410. doi:10.1177/0032885599079004003

Pearson, F. S., Lipton, D. S., Cleland, C. M., & Yee, D. S. (2002). The effects of behavioural/cognitive–behavioural programmes on recidivism. *Crime and Delinquency, 48*, 476–496. doi:10.1177/0011128702048003006

Perry, A. E., Darwin, Z., Godfrey, C., McDougall, C., Lunn, J., Glanville, J., et al. (2009). *Substance Use and Misuse, 44*, 374–400. doi:10.1080/10826080802347560

Peterson, J., Skeem, J., Hart, E., Vidal, S., & Keith, F. (2010). Typology of offenders with mental disorder: Exploring the criminalization hypothesis. *Psychiatric Services, 61*, 1217–1222. doi:10.1176/appi.ps.61.12.1217

Peterson, J., Skeem, J., Kennnealy, P., Bray, B., & Zvonkovic, A. (2014). How often and how consistently do symptoms directly precede criminal behavior among offenders with mental illness? *Law and Human Behavior, 38*, 439–449. doi:10.1037/lhb0000075

Platt, J. J., Scura, W. C., & Hannon, J. R. (1973). Problem solving thinking of youthful incarcerated heroin addicts. *Journal of Community Psychology, 1*, 278–281. doi:10.1002/1520-6629(197307)1:3<278:AID-JCOP2290010307>3.0.CO;2-I

Porporino, F. J., Fabiano, E. A., & Robinson, D. (1991). *Focusing on successful reintegration: Cognitive skills training for offenders* (Report No. R-19). Retrieved from Government of Canada Publications website: http://publications.gc.ca/site/eng/9.568196/publication.html

Prendergast, M. L., Hall, E. A., & Wexler, H. K. (2003). Multiple measures of outcome in assessing a prison-based drug treatment program. *Journal of Offender Rehabilitation, 37*, 65–94. doi:10.1300/J076v37n03_04

Prins, S., Skeem, J., Mauro, C., & Link, B. (2015). Criminogenic factors, psychotic symptoms, and incident arrests among people with serious mental illnesses under intensive outpatient treatment. *Law and Human Behavior, 39*, 177–188. doi:10.1037/lhb0000104

Reinecke, M. A., & Freeman, A. (2003). Cognitive therapy. In A. S. Gurman & S. B. Messer (Eds.), *Essential psychotherapies: Theory and practice* (2nd ed., pp. 224–271). New York: Guilford.

Roberts, C. (2004). An early evaluation of a cognitive offending behavior programme ('Think First') in probation areas. *Vista: Perspective on probation, 8*, 130–136.

Robinson, D. (1995). *The impact of cognitive skills training on post-release recidivism among Canadian federal offenders* (Report No. R-41). Retrieved from Government of Canada Publications website http://publications.gc.ca/site/eng/379318/publication.html

Ross, R. R., & Fabiano, E. A. (1985). *Time to think: A cognitive model of delinquency prevention and offender rehabilitation.* University of Tennessee: Institute of Social Sciences and Art.

Ross, R., & Ross, R. (1995). *Thinking straight: The reasoning and rehabilitation program for delinquency prevention and offender rehabilitation*. Ottawa, Ontario, Canada: Air Training.

Ross, R. R., Fabiano, E. A., & Ewles, C. D. (1988). Reasoning and rehabilitation. *International Journal of Offender Therapy and Comparative Criminology, 32*, 29–35. doi:10.1177/0306624X8803200104

Ross, R. R., Fabiano, E. A., & Ross, R. D. (1986). *Reasoning and rehabilitation: A handbook for teaching cognitive skills.* Ottawa, Ontario: T3 Associates.

Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*, 1–28. doi:10.1037/h0092976

Sacks, S., McKendrick, K., Sacks, J. Y., & Cleland, C. M. (2010). Modified therapeutic community for co-occurring disorders: Single investigator meta-analysis. *Substance Abuse, 31*, 146–161. doi:10.1080/08897077.2010.495662

Sacks, S., Sacks, J. Y., & De Leon, G. (1999). Treatment for MICAs: Design and implementation of the modified TC. *Journal of Psychoactive Drugs, 31*, 19–30. doi:10.1080/02791072.1999.10471722

Sacks, S., Sacks, J. Y., McKendrick, K., Banks, S., & Stommel, J. (2004). Modified TC for MICA offenders: Crime outcomes. *Behavioral Sciences and the Law, 22*, 477–501. doi:10.1002/bsl.599

Samenow, S. E. (1984). *Inside the criminal mind*. New York: Times Books.

Sarteschi, C. (2013). Mentally ill offenders involved with the U.S. criminal justice system: A synthesis. *Sage Open*, July–September, 1–11. doi:10.1177/2158244013497029

Seligman, M. E. P., Walker, E. F., & Rosenhan, D. L. (2001). *Abnormal psychology* (4th ed.). New York: W.W. Norton.

Siegal, H., Li, L., & Rapp, R. (2002). Case management as a therapeutic enhancement: Impact on posttreatment criminality. *Journal of Addictive Diseases, 21*, 37–47. doi:10.1300/J069v21n04_04

Skeem, J. L., Manchak, S., & Peterson, J. K. (2011). Correctional policy for offenders with mental illness: Creating a new paradigm for recidivism reduction. *Law and Human Behavior, 35*, 110–126. doi:10.1007/s10979-010-9223-7

Skeem, J., Kennealy, P., Monahan, J., Peterson, J., & Appelbaum, P. (2015). Psychosis uncommonly and inconsistently precedes violence among high-risk individuals. *Clinical Psychological Science*. Published online before print April 24, 2015. doi:10.1177/2167702615575879

Skeem, J., Steadman, H., & Manchak, S. (2015). Applicability of the Risk-Need-Responsivity model to persons with mental illness involved in the criminal justice system. *Psychiatric Services in Advance*. Published online May 1, 2015. http://dx.doi.org/10.1176/appi.ps.201400448

Solomon, P., Draine, J., & Marcus, S. (2002). Predicting incarceration of clients of the psychiatric probation and parole service. *Psychiatric Services, 53*, 50–56. doi:10.1176/appi.ps.53.1.50

Spiropoulos, G. V., Spruance, L., Voorhis, P. V., & Schmitt, M. M. (2005). Pathfinders and Problem Solving: Comparative effects of two cognitive-behavioral programs among men and women offenders in community and prison. *Journal of Offender Rehabilitation, 42*, 69–94. doi:10.1300/J076v42n02_05

Spivack, G., Platt, J. J., & Shure, M. B. (1976). *The problem solving approach to adjustment*. San Francisco, CA: Jossey-Bass.

Steadman, H., Osher, F., Clark Robbins, P., Case, B., & Samuels, S. (2009). Prevalence of serious mental illness among jail inmates. *Psychiatric Services, 60*, 761–765. doi:10.1176/appi.ps.60.6.761

Steele, R. (2002a). *Psychometric features of think first participants pre and post programme*. Merseyside, England: Research and Information Section, National Probation Service.

Steele, R. (2002b). *Reconviction of offenders on think first*. Merseyside, England: Research and Information Section, National Probation Service.

Stewart-Ong, G., Harsent, L., Roberts, C., Burnett, R., & Al-Attar, Z. (2004). *Think First prospective research study: Effectiveness and reducing attrition*. London, England: National Probation Service.

Stohr, M. K., Hemmens, C., Buane, D., Dayley, J., Gornik, M., & Kjaer, K., et al. (2001). *Residential substance abuse treatment for state prisoners (RSAT) partnership process evaluation, final report* (NCJ publication No. 187352). Retrieved from https://www.ncjrs.gov/pdffiles1/nij/grants/187352.pdf

Telander, R. L. (2005). Offender treatment: An evaluation of a cognitive restructuring program. *Dissertation Abstracts International, 66*, 1187.

Tong, L. S. J., & Farrington, D. P. (2006). How effective is the "Reasoning and Rehabilitation" programme in reducing reoffending? A meta-analysis of evaluations in four countries. *Psychology, Crime & Law, 12*, 3–24. doi:10.1080/10683160512331316253

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment. (2005). *Substance abuse treatment for adults in the criminal justice system treatment improvement protocol (TIP) series 44* (DHHS publication No. 05-4056). Retrieved from http://www.ncbi.nlm.nih.gov/books/NBK64137/pdf/Bookshelf_NBK64137.pdf

US. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance. (2005). *Residential substance abuse treatment for state prisoners (RSAT) program* (NCJ publication No. 206269). Retrieved from https://www.ncjrs.gov/pdffiles1/bja/206269.pdf

Van Dorn, R., Desmarais, S., Petrila, J., Haynes, S., & Singh, J. (2013). Effects of outpatient treatment on risk of arrest of adults with serious mental illness and associated costs. *Psychiatric Services, 64*, 856–862. doi:10.1176/appi.ps.201200406

Wakeling, H. C. (2007). The psychometric validation of the Social Problem solving Inventory—Revised with UK incarcerated sexual offenders. *Sexual Abuse, 19*, 217–236. doi:10.1007/s11194-007-9038-3

Wallace, B. C., Conner, L. C., & Dass-Brailsfor, P. (2011). Integrated trauma treatment in correctional health care and community-based treatment upon reentry. *Journal of Correctional Health Care, 17*, 329–343. doi:10.1177/1078345811413091

Walters, G. D. (2002). *Criminal belief systems: An Integrated-Interactive Theory of Lifestyles*. Westport, CT: Praeger.

Walters, G. D., & Elliott, W. N. (1999). Predicting release and disciplinary outcome with the psychological inventory of criminal thinking styles: Female data. *Legal and Criminological Psychology, 4*, 15–21.

Walters, G. D., & White, T. W. (1989). Thinking criminal: A cognitive model of lifestyle criminality. *Women Lawyers Journal, 76*, 4.

Wanberg, K. W., & Milkman, H. B. (1998). *Criminal Conduct and Substance Abuse Treatment: Strategies for Self-Improvement and Change; The provider's guide*. Thousand Oaks, CA: Sage Publications.

Wanberg, K. W., & Milkman, H. B. (2006). *Criminal conduct and substance abuse treatment: Strategies for self-improvement and change: The participant's workbook*. Thousand Oaks, CA: Sage Publications.

Ward, T., Yates, P. M., & Willis, G. M. (2012). The Good Lives Model and the Risk Need Responsivity Model: A critical response to Andrews, Bonta, and Wormith (2011). *Criminal Justice and Behavior, 39*, 94–110. doi:10.1177/0093854811426085

Weiner, R. L., & Brank, E. M. (Eds.). (2013). *Problem solving courts: Social science and legal perspectives*. New York: Springer. doi:10.1007/978-1-4614-7403-6

Welsh, W. N., & Zajac, G. (2013). A multisite evaluation of prison-based drug treatment: Four-year follow-up results. *The Prison Journal, 93*, 251–271. doi:10.1177/0032885513490265

Westmarland, N., Reid, P., Coulson, S., Hughes, J., & Hester, M. (2002). *An investigation into the factors associated with attrition in the Northumbria Probation Think First Programme*. Sunderland, England: International Centre for the Study of Violence and Abuse, University of Sunderland.

Wexler, H. K. (1995). The success of therapeutic communities for substance users in American prisons. *Journal of Psychoactive Drugs, 27*, 57–66. doi:10.1080/02791072.1995.10471673

Wilson, D. B., Bouffard, L. A., & MacKenzie, D. L. (2005). A quantitative review of structured, group-oriented, cognitive-behavioral programs for offenders. *Criminal Justice and Behavior, 32*, 172–204.

Yochelson, S., & Samenow, S. E. (1976). *The criminal personality: A profile for change* (Vol. l). New York: Jason Aronson.

Young, S., & Thome, J. (2011). ADHD and offenders. *World Journal of Biological Psychiatry, 12*, 124–128. doi:10.3109/15622975.2011.600319

Zamble, E., & Porporino, F. J. (1988). *Coping behavior and adaption in prison inmates*. New York: Springer. doi:10.1007/978-1-4613-8757-2

Zamble, E., & Quinsey, V. L. (1997). *The criminal recidivism process*. Cambridge, England: Cambridge University Press. doi:10.1017/CBO9780511527579

Zlotnick, C. (1997). Postraumatic stress disorder (PTSD), PTSD comorbidity, and childhood abuse among incarcerated women. *Journal of Nervous and Mental Disease, 185*, 761–763. doi:10.1097/00005053-199712000-00007

Zlotnick, C., Johnson, J., & Najavits, L. M. (2009). Randomized controlled pilot study of cognitive-behavioral therapy in a sample of incarcerated women with substance use disorder and PTSD. *Behavior Therapy, 40*, 325–336. doi:10.1016/j.beth.2008.09.004

Zlotnick, C., Najavits, L. M., Rohsenow, D. J., & Johnson, D. M. (2003). A cognitive-behavioral treatment for incarcerated women with substance abuse disorder and posttraumatic stress disorder: Findings from a pilot study. *Journal of Substance Abuse Treatment, 25*, 99–105. doi:http://dx.doi.org/10.1016/S0740-5472(03)00106-5