GLOBAL CORRECTIONS GROUP

THE EFFECTIVENESS OF CORRECTIONAL PROGRAMS IN THE FEDERAL BUREAU OF PRISONS: A SYSTEMATIC EVIDENCE-BASED REVIEW OF RESEARCH (2000-2022)

CHAPTER 7 – COGNITIVE-BEHAVIORAL THERAPY PROGRAMS FOR MENTAL AND BEHAVIORAL DISORDERS

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COGNITIVE BEHAVIORAL THERAPY PROGRAMS FOR MENTAL AND BEHAVIORAL DISORDERS

In this chapter, we review prison-based cognitive-behavioral therapy (CBT) programs for mental and behavioral disorders. The Federal Bureau of Prisons (BOP) offers thirteen First Step Act (FSA) approved programs in this category – six programs classified by the BOP as Evidence-Based Recidivism Reduction (EBRR) Programs, and seven programs classified by the BOP as Productive Activity (PA) Programs. We begin by describing the BOP's CBT programs for individuals with mental and behavioral disorders, to include the assessment of needs addressed by the programs. We then describe our study identification procedures, provide a review of evaluations conducted both inside and outside of the BOP, compare BOP programs to evaluated programs in other jurisdictions, and offer an assessment of the effectiveness of each BOP CBT program based on our review. We then conclude this chapter with recommendations for future CBT programming initiatives.

7.1 An Overview of Cognitions and Related Needs and CBT Programs for Mental and Behavioral Disorders

The BOP offers a series of programs for incarcerated persons with mental and behavioral disorders. In other chapters of this report, we address the use of CBT programs in the treatment of serious mental illnesses (Chapter 5), substance use disorders (Chapter 8), sexual disorders (Chapter 9), and trauma-related disorders (Chapter 6). In this chapter, we address the use of CBT programs to address other types of mental and behavioral disorders. All but one of the CBT programs discussed in this chapter are supported by the Psychology Services Branch (PSB) in the Reentry Services Division (RSD). The remaining program is supported by the Women and Special Populations Branch (WSPB), also within the RSD.

As noted in previous chapters, programs for persons with mental and behavioral disorders are staffed primarily by doctoral level clinical and counseling psychologists. For select programs, the staffing complement also includes treatment specialists and social workers with bachelor's or master's degrees. Training provided to these staff is detailed in Chapter 5 of this report. In addition, the one program supported by the WSPB - the Start Now Program - may be facilitated by a variety of staff, as will be addressed in the description of this program.

Programs for incarcerated individuals with mental and behavioral disorders address a series of needs. The CBT programs described in this chapter address primarily cognitions and/or mental

health needs. The BOP's procedures for assessing mental health needs are described in Chapter 5 of this report. In addition to cognitions and mental health needs, a portion of these programs also directly anger/hostility and antisocial peers needs. Procedures for identifying cognitions, antisocial peers, and anger/hostility needs are described below.

7.1.1 Identifying Cognitions and Antisocial Peers Needs

Given their CBT focus, many of the programs for incarcerated individuals with mental and behavioral disorders address cognitions needs. *Program Statement 5400.01 First Step Act Needs Assessment* indicates Psychology Services departments are responsible for assessing cognitions needs, as well antisocial peers needs (RSD, 2021). This policy refers staff to the BOP's internal website, Sallyport, for additional information. According to the BOP, cognitions needs refer to antisocial cognitions "characterized by a belief and values system supportive of crime" as well as resentment and defiance (BOP, 2022). Antisocial peers needs focus on the risk of involvement in criminal activities when one associates with others engaged in these activities.

The BOP has adopted the Measures of Criminal Attitudes and Associates (MCAA) to evaluate cognitions needs, as well as antisocial peers needs. Like the BOP's approach to the assessment of trauma needs as discussed in Chapter 6, the MCAA is a self-report instrument relying on data provided by incarcerated individuals via the BOP's internal computer system. The MCAA examines antisocial associates and attitudes associated with a criminal lifestyle, i.e., violence, entitlement, antisocial intent, and associates (Mills et al., 2004). Attitudes are measured via a 46-item scale. MCAA results have been found to be predictive of both general and violent recidivism (Mills et al, 2004). A 2022 BOP report notes 41% of individuals refused to complete the portion of the MCAA related to cognitions and 47% of individuals refused to complete the portion of the MCAA related to antisocial peers. The newly issued *Program Statement 5410.01, CN-2, First Step Act of 2018 – Time Credits: Procedures for Implementation of 18 U.S.C. 3632(d)(4)* establishes an additional incentive for individuals to complete self-report needs assessments (CPB, 2023). Specifically, individuals will be unable to earn time credits until these assessments are complete. This new requirement will likely increase the number of individuals who complete these assessments. For individuals who do complete the MCAA, 68% present with cognitions needs and 44% present with antisocial peers needs. The MCAA cutoff scores used to identify these needs are not clearly identified in publicly available documents.

7.1.2 Identifying Anger/Hostility Needs

A subset of programs for incarcerated individuals with behavioral disorders address the need of anger/hostility. Program Statement *5401.01 First Step Act Needs Assessment* indicates Psychology Services departments are also responsible for assessing anger/hostility needs (RSD,

2021). According to the BOP, this need involves a "temperamental and antisocial personality, including anger and hostility" which "contributes to callous, self-indulgent, and rule-violating behavior" in opposition to "living a prosocial lifestyle and toward a life of criminality" (BOP, 2022). The BOP relies on the Brief Anger-Aggression Questionnaire (BAAQ) to measure this need. The BAAQ is a 6-item screening tool to assess levels of anger and aggression (Maiuro et al., 1987). The developers note "a cutoff score of 9 can be interpreted as suggesting anger dyscontrol problems with a fair degree of confidence" (Maiuro et al., 1987). Like the ACES and MCAA, the BAAQ also relies on self-report data provided by individuals via the BOP's internal computer system. A 2022 BOP report notes 9% of individuals refused to complete the BAAQ. For individuals who do complete this assessment, 59% present with anger/hostility needs (BOP, 2022).

7.2 Descriptions of CBT Programs for Mental and Behavioral Disorders

The BOP's CBT programs for incarcerated individuals with mental and behavioral disorders include two residential treatment programs, the Bureau Responsibility and Values Enhancement (BRAVE) and Challenge Programs, ten non-residential Psychology Services "Priority Practice" programs, and one non-residential WSPB program. The non-residential programs include the Anger Management, Basic Cognitive Skills, Criminal Thinking, Emotional Self-Regulation, Mindfulness-Based Cognitive Therapy, Circle of Strength, CBT for Suicidal Individuals, Brief CBT for Eating Disorders, CBT for Insomnia, CBT for Prison Gambling, and Start Now Programs. Each program relies on CBT interventions; however, per the BOP's First Step Act Approved Programs Guide, not all these programs address a cognitions need. While most of the programs do address a cognitions need, three programs address only a mental health need (i.e., the Mindfulness-Based Cognitive Therapy, CBT for Eating Disorders, and CBT for Insomnia Programs) and some programs also address other needs, i.e., anger/hostility, antisocial peers. Procedures for identifying these needs were described above.

As noted in Chapter 5, the BOP's residential treatment programs are intensive treatment programs, requiring a minimum of 500 programming hours. The BRAVE and Challenge Programs are such programs. These programs rely on a modified therapeutic community (MTC) model, with dedicated staff facilitators, interactive groups, and community meetings. These programs are staffed with doctoral level psychologists and bachelor's and master's level treatment specialists. In addition, these staff complete formal training in cognitive-behavioral therapies and the MTC model, including an online training curriculum and 24 hours of in-person training. Residential psychology treatment programs are explicitly described in *Program Statement 5330.11 Psychology Treatment Programs* (PSB, 2016). Chapter 1 of this policy details core elements of the BOP's residential psychology treatment programs: a residential unit set apart from the general population with programming rooms and treatment staff offices; clinical components

including diagnoses and individual treatment plans for each participant, the targeting of criminogenic needs, therapeutic activities including community meetings, a clinical team that monitors all aspects of treatment and participates in clinical supervision; and operational elements including a written program philosophy, rules and consequences, behavioral contingencies, and program rituals. Program Review Guidelines address these core elements to ensure the program is implemented consistent with the BOP's model. As with other residential psychology treatment programs, achievement awards are in place to encourage participation in programming.

Non-residential psychology programs are also offered by Psychology Services departments, but they do not have a dedicated staffing complement. Most of these programs are identified as "Priority Practices" in the agency and referenced in *Program Statement 5310.16 Treatment and Care of Inmates with Mental Illness* (PSB, 2016). Specifically, this policy describes these non-residential psychology treatment programs as evidence-based practices and group treatment methods addressing core needs of the population. Per policy, at a minimum Psychology Services departments offer at least one Priority Practice program every quarter. This policy affords institutions significant latitude in selecting specific programs to implement and program-specific Program Review Guidelines do not exist. Each priority practice does include a fidelity checklist to aid facilitators in ensuring the program is implemented as intended.

As noted above, one non-residential CBT-based program is supported by the WSPB. The program is not explicitly described in policy; however, the program does meet a policy requirement for institutions to offer gender-responsive programming for women (WSPB, 2022).

The below table outlines key features of the BOP's thirteen CBT programs for mental and behavioral disorders, including the target population, needs addressed, and program dosage. In addition, the table notes the number of institutions offering the program and the number of individuals participating in the program at the close of FY 2023. Lastly, the table provides an estimate of the percentage of the target population served by the program to date. Specifically, this estimate compares the total number of program participants and graduates in custody to the total number of individuals in custody with a potential need for such a program. This estimate represents an educated guess, as we did not have access to data allowing for perfect one-to-one comparisons of needs and programs. Following the table, each CBT program is described in detail.

CBT Programs for Mental and Behavioral Disorders

Program	Target Population	Need(s)	Dosage	Institutions at FY23 End	Participants at FY23 End	Estimated % of Target Population Served Since 1/15/20
BRAVE Program (EBRR)	Newly designated medium security individuals 32 years of age or younger serving sentences of 5 years or more	Cognitions, Antisocial Peers	500 hours	5	275	1.33% of medium security individuals
Challenge Program (EBRR)	High security individuals to include those with substance use and/or mental health issues	Substance Use, Cognitions, Anger/Hostility, Antisocial Peers, Mental Health	500 hours	12	728	6.82% of high security individuals
Anger Management Program (EBRR)	Individuals with elevated levels of anger/hostility	Anger/ Hostility, Cognitions	18 hours	94	1,626	17.57% of individuals with an anger/ hostility need
Basic Cognitive Skills Program (EBRR)	Individuals with a need for basic cognitive skills as a foundation for future programming	Cognitions	24 hours	62	695	9.76% of individuals with a cognitions need
Criminal Thinking Program (EBRR)	Individuals with criminal thinking errors	Cognitions, Antisocial Peers	27 hours	73	1,034	10.12% of individuals with a cognitions need
Emotional Self-Regulation Program (EBRR)	Individuals with difficulty modulating and managing their emotions	Cognitions, Mental Health	24 hours	24	222	31.03% of individuals with a mental health need
Mindfulness-Based Cognitive Therapy (PA)	Individuals with depression and/or anxiety	Mental Health	16 hours	8	23	4.33% of individuals with a mental health need
Circle of Strength Program (PA)	Individuals at detention centers	Cognitions, Mental Health, Trauma	20 hours	18	212	12.71% of individuals in detention centers
Brief CBT for Suicidal Individuals Program (PA)	Individuals with suicidal ideation and/or a recent history of suicide attempts	Mental Health	20 hours	8	11	.70% of individuals with a mental health need

CBT for Eating Disorders Program (PA)	Individuals with diagnosed eating disorders	Mental Health	20 hours	0	0	0.00% of individuals with a mental health need
CBT for Insomnia Program (PA)	Individuals with sleep disturbances	Mental Health	10 hours	8	16	3.54% of individuals with a mental health need
CBT for Prison Gambling Program (PA)	Individuals with problem gambling in the institution	Cognitions, Antisocial Peers	20 hours	28	99	4.30% of individuals with a cognitions need
Start Now Program (PA)	Individuals with behavioral disorders	Anger/Hostility, Cognitions	32 hours	29	842	4.51% of individuals with a cognitions need

Residential Treatment Programs

7.2.1 BRAVE Program

The BRAVE Program is a residential treatment program, classified by the BOP as an EBRR Program (BOP, 2022). This cognitive-behavioral program is "designed to facilitate favorable institutional adjustment and reduce incidents of misconduct. In addition, the program encourages participants to interact positively with staff members and take advantage of opportunities to engage in self-improvement throughout their incarceration" (BOP, 2022). The program was developed in 1998 as a pilot project aimed at reducing the risk of institutional disturbances by intervening early with the individuals most likely to engage in these disturbances. Per the BOP, "young, newly committed inmates serving long sentences were identified as the group most likely to engage in both disturbances and general institutional misconduct" (PSB, 2016). Consequently, the target population for the program is newly designed medium security individuals, 32 years of age or younger, serving sentences of at least 5 years. After internal research suggested the program significantly reduced misconduct, the program was expanded, and core components were realigned to mirror the BOP's other residential treatment programs. The BRAVE Program focuses on cognitions; however, antisocial peers needs are addressed as well. Individuals are automatically enrolled in the BRAVE Program based on the target population criteria outlined above. Individuals may be directly designated to the program, or they may be screened upon arrival to the institution and placed in the program. Individuals are strongly encouraged to participate in the program, but participation is not mandatory. Individuals may decline the program. If they decline the program, they are removed from the programming unit.

As noted above, the BRAVE Program relies on an MTC model for service delivery, including psychoeducational interventions, cognitive-behaviorally-based interactive groups, skills practice, interactive journaling, and community meetings. The 6-month, 500 hour program includes half-day programming, five days per week. Program modules address the following topic areas: developing interpersonal skills, behaving pro-socially in a prison environment, challenging antisocial attitudes and criminality, developing problem solving skills, and planning for release. The curriculum is provided via a facilitator guide and a series of interactive journals developed by The Change Companies. Consistent with other residential treatment programs, the BRAVE Program consists of three phases (PSB, 2016). The orientation phase focuses on building rapport and motivation, conducting a thorough psychosocial assessment and developing a treatment plan. This phase requires approximately one month to complete and relies on two interactive journals entitled Orientation and Adjustment to Incarceration. The core treatment phase focuses on developing prosocial relationships and the skills required to live a drug-free, crime-free, and well-managed life. Ordinarily, the core treatment phase requires four months to complete and relies on three interactive journals entitled Rational Thinking, Criminal Lifestyle, and Living with Others. The one-month transition phase focuses on continued practice of prosocial skills as well as realistic expectations and prison living skills. Interactive journals used in this phase include Lifestyle Balance and Success Strategies. Progress reviews are completed every 60 days and treatment plans are updated accordingly.

The BRAVE Program is staffed by a doctoral level psychologist, who serves as the Program Coordinator, as well as four bachelor's or master's level Treatment Specialists. The program has a 1:20 Treatment Specialist-to-participant ratio (PSB, 2016). Program staff receive the BOP's standardized online and in-person training on the MTC model and cognitive-behavioral interventions. Program Review Guidelines are in place to ensure the program is implemented as intended. Successful completion of the program is based on a participant demonstrating the following behaviors: taking on the responsibilities of the community, making a commitment to positive change as evidenced by observed positive behaviors, expressing themselves in group demonstrating the ability to give and receive appropriate feedback from staff and other incarcerated individuals, and mastering phase-related concepts (PSB, 2016). Progress reviews are completed every 60 days and treatment plans are updated accordingly. Achievement awards and other tangible awards are provided with successful progress in treatment. In addition to reducing the risk of recidivism, the program's anticipated outcomes are improved institutional adjustment and a reduction in misconduct.

In the BOP's FSA Approved Programs Guide, the BRAVE Program is described as available at five institutions – FCI Beckley, WV; FCI El Reno, OK; FCI Greenville, IL; FCC Victorville, CA; and FCI Williamsburg, VA (BOP, 2023). At the close of FY 2023 the program was offered at all five

institutions (BOP, 2022). In calendar year 2021, 53 individuals were enrolled in the program and 80 individuals completed the program (BJS, 2022). At the close of FY 2023, there were 275 individuals participating in the program, up slightly from 266 individuals participating in the program at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, 1.33% of the BOP's male, medium security population either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program.

7.2.2 Challenge Program

The Challenge Program is also classified by the BOP as an EBRR Program (BOP, 2022). The cognitive-behavioral, MTC program is designed to address treatment needs in a high security population, to include both substance abuse and mental health needs, to facilitate both favorable institutional adjustment and successful reintegration to the community (PSB, 2016). The program also addresses criminality via challenges to criminal thinking errors (BOP, 2022). Originally developed in 1997 as a generic treatment program for high security individuals, the program was refocused in 2006 to align with core components of the BOP's other residential treatment programs, e.g., basic cognitive skills and criminal thinking modules. In addition, the revision included treatment tracks focused on substance abuse and mental health treatment for individuals with these additional needs. Consequently, the target population for the program is high security individuals with behavioral disorders, as well as a history of drug abuse as evidenced by self-report, Presentence Investigation Report documentation, or incident reports for use of alcohol or drugs and/or a major mental illness as evidenced by a current diagnosis of a psychotic disorder, mood disorder, anxiety disorder, or personality disorder. The Challenge Program addresses cognitions, anger/hostility, and antisocial peers needs; however, as applicable, substance use and mental health needs are also addressed in the program.

To be deemed eligible for the program, individuals are screened by the Challenge Program Coordinator, a doctoral level psychologist. Indicators of program eligibility include, but are not limited to, a Unit Management referral for the Drug Education Program (see Chapter 8), an incident report for the use of alcohol or drugs, a history of substance abuse noted in the individual's Pre-Sentence Investigation Report, a DSM-5 diagnosis of a major mental disorder, symptoms of a major mental illness, and/or recent placement on suicide watch. Individuals may also self-refer for the program, provided they meet the admission criteria. Eligible individuals are strongly encouraged to participate in the program, but participation is not mandatory. Individuals may participate in the program at any point in their sentence; however, participation early in their sentence is encouraged.

The program is staffed with a psychologist who serves as the Challenge Program Coordinator and a minimum of three master's or bachelor's level Treatment Specialists. The Challenge Program has a 1:20 Treatment Specialist-to-participant ratio (PSB, 2016). Like the BOP's other residential treatment programs, the Challenge Program relies on an MTC model for service delivery, including psychoeducational interventions, cognitive-behaviorally-based interactive groups, skills practice, interactive journaling, and community meetings. The program is explicitly described in policy and there are Program Review Guidelines in place to ensure the program is implemented as intended. The 500 hour unit-based program includes half-day programming, five days per week.

The curriculum is provided via a facilitator guide and a series of interactive journals developed by The Change Companies in collaboration with the BOP. All individuals in the program complete a core curriculum. Core program modules address the following topic areas: Orientation, Rational Thinking, Criminal Lifestyles, Violence Prevention, Communication Skills, Lifestyle Balance, and Transition (PSB, 2016). The Orientation journal begins to explore the individual's life circumstances and starts them on a path to positive change. The Rational Thinking journal teaches cognitive-behavioral skills consistent with the BOP's theoretical approach, i.e., rational self-analysis. In the Criminal Lifestyles journal, the origins of criminal behaviors and the impact of a criminal lifestyle are addressed. The Violence Prevention journal explores individuals' relationship with violence and how to break a cycle of violence. The Communication Skills journal addresses effective communication, anger management skills, and healthy relationships. The Lifestyle Balance journal evaluates different aspects of an individual's life and strategies to balance these areas, e.g., health, work, family. The Transition journal addresses expectations for the future and key transition issues.

In addition to the core curriculum, individuals complete additional treatment tracks, based on their presenting problems (PSB, 2016). Individuals in the substance abuse track complete two additional journals: Reviewing My Drug Use and Recovery Maintenance. The Reviewing My Drug Use journal examines an individual's drug use history and the damaging consequences of drug use. The Recovery Maintenance journal focuses on developing a recovery maintenance plan and developing strategies to exit from a relapse process. Individuals in the mental illness track of the program complete two other First Step Act approved programs, the Illness Management and Recovery and Social Skills Training Programs. Information about these programs can be found in Chapter 5 of this report.

The unit-based portion of the Challenge Program is divided into three phases: (1) the orientation phase, (2) the core treatment phase, and (3) the transition phase (PSB, 2016). The orientation phase focuses on building rapport and motivation, conducting a thorough psychosocial assessment, developing a treatment plan, and learning to give and receive feedback from staff

and peers. This phase requires approximately one month to complete. The core treatment phase focuses on developing prosocial relationships and the skills required to live a drug-free, crime-free, and well-managed life. Ordinarily, the core treatment phase requires six months to complete. The two-month transition phase focuses on continued practice of prosocial skills as well as realistic expectations and living skills to function in a prison environment. Successful completion of the program is based on the following: taking on the responsibilities of the community, making a commitment to positive change as evidenced by observed positive behaviors, expressing themselves in group, demonstrating the ability to give and receive appropriate feedback from staff and individuals, and mastering phase-related concepts (PSB, 2016). Progress reviews are completed every 60 days and treatment plans are updated accordingly. Achievement awards and other tangible awards are provided with successful progress in treatment. In addition to reducing the risk of recidivism, the program's anticipated outcomes are improved institutional adjustment, a reduction in misconduct, a reduction in the symptoms of a substance use disorder and/or mental illness.

In the BOP's FSA Approved Programs Guide, the Challenge Program is described as available at 13 institutions (BOP, 2022). At the end of FY 2023 the program was offered at 12 institutions; USP Allenwood no longer appears to be offering the program (BOP, 2023). In calendar year 2021, 516 individuals were enrolled in the program and 190 individuals completed the program (BJS, 2022). At the close of FY 2023 728 individuals were participating in the program, down from 857 individuals participating in the program at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, 6.82% of the BOP's high security either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program.

Non-Residential Treatment Programs

7.2.3 Anger Management Program

The Anger Management Program is classified by the BOP as an EBRR Program "designed to help individuals better manage their anger" (BOP, 2022). As initially implemented, the Anger Management Program relied on curriculum developed by the Substance Abuse and Mental Health Administration (SAMHSA) to address the needs of individuals with substance use disorders and anger management issues. The BOP subsequently revised the program to address the needs of a correctional population more directly and a new treatment protocol was developed in collaboration with The Change Companies (PSB, n.d.). The stated goal of the program is to teach skills to manage strong emotions such as anger. The target population for this program is individuals with an anger/hostility need, as well as cognitions needs. Individuals

are referred to the program based on an elevated score on the BAAQ, although the specific cutoff score for a referral is not identified in program materials.

The Anger Management Program is a 10-session, cognitive-behavioral program consisting of lectures, group discussions, interactive journaling, and homework assignments. The program is designed for delivery in a group setting; however, it can be delivered individually as well. Resources for the Anger Management Program include a gender-responsive facilitator guide and participant manual, which is available in both English and Spanish, from The Change Companies. The program relies on cognitive-behavioral and mindfulness techniques, using an interactive journaling and group discussion format, to raise self-awareness and enhance emotional self-regulation and promote healthy relationships. Program modules address the following topic areas: what is anger, responding to anger, effects of anger, self-talk, your thoughts and anger, healthy physical habits, the anger iceberg, anger and other people, and my next steps from a cognitive-behavioral orientation (The Change Companies, n.d.).

The Anger Management Program is briefly referenced in *Program Statement 5310.17 Psychology Services Manual* (PSB, 2016). This policy notes psychologists may offer reentry programming on an outpatient basis and the Anger Management Program is offered as an example of reentry programming. However, no additional information about the program is provided. Criteria for successful completion of the program are not indicated, but likely involve regular attendance and participation. In addition to reducing the risk of recidivism, the program's anticipated outcomes are a reduction in the symptoms of anger/hostility, improved institutional adjustment, and a reduction in misconduct. Program outcomes are not formally measured, but incident reports could likely serve as an intermediate outcome measure as could re-administration of the BAAQ.

In the BOP's FSA Approved Programs Guide, the Anger Management Program is described as available at all institutions (BOP, 2023). At the close of FY 2023 the program was offered at 94 institutions (BOP, 2023). In calendar year 2021, 2,257 individuals were enrolled in the program and 3,023 individuals completed the program (BJS, 2022). At the close of FY 2023, there were 1,626 individuals participating in the program, up significantly from 1,248 individuals participating in the program at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, 17.57% of the BOP population with an anger/hostility need either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program.

7.2.4 Basic Cognitive Skills Program

The Basic Cognitive Skills Program is classified by the BOP as an EBRR Program. According to the BOP (2022), this cognitive-behavioral program teaches "basic concepts…including the 5 Rules for

Rational Thinking and the use of Rational Self-Analysis" to serve as foundational skills for additional programming. The program was developed by the BOP and is consistent with cognitive-behavioral modules in other BOP programs. Grounded in the work of Albert Ellis, i.e., Rational Emotive Behavior Therapy (REBT) and Maxie Maultsby, i.e., Rational Behavior Therapy (RBT), the core components of this program are found in many of the BOP's cognitive-behaviorally based programs, e.g., Residential Drug Abuse Program, Challenge Program, Sex Offender Treatment Programs, BRAVE Program (Ellis & MacLaren, 1998; Maultsby, 1990). The stated goal of the program is to provide individuals with foundational skills as a lead-in to other cognitive-behaviorally based programs, i.e., the Emotional Self-Regulation Program and the Criminal Thinking Program**.** The target population for this program is individuals with cognitions needs. Procedures for referring individuals to the program are not clearly stated, but likely involve consideration of an individual's score on the MCAA.

The Basic Cognitive Skills Program is a combination of lectures, group discussions, and homework assignments aimed at teaching the basic concepts of REBT, including the Five Rules for Rational Thinking and use of Rational Self-Analyses (BOP, n.d.). Typically, the program is completed in 24 hours. Primarily for group treatment, the program may be used for individual treatment in some cases. Resources for the program include a facilitator guide and interactive participant journal, available from The Change Companies (n.d.). The participant journal used in this program was originally developed for use in the Non-Residential Drug Abuse Program (see Chapter 8 of this report). The journal addresses four core topic areas: (1) learn your ABCs to understand activating events, beliefs, and consequences, (2) five rules for rational thinking to identify and challenge distorted thinking, (3) check your thinking by conducting a Rational Self-Analysis (RSA), and (4) practice, practice, practice by using RSAs in everyday situations. Participants are encouraged to check their perceptions, challenge their beliefs, and examine their choices as they review relevant scenarios. The facilitator guide available on the BOP's internal website notes treatment must include a period of skills practice, with participants using RSAs in their daily life, for a minimum of one month but usually longer (PSB, 2013). Facilitators are encouraged to assign at least three RSAs per week.

The program is facilitated by psychologists or mid-level clinical practitioners (e.g., treatment specialists, psychology interns) under the supervision of a psychologist. Clinical training in REBT/RBT is required to facilitate the program. Facilitators are encouraged to read *Rational Emotive Behavior Therapy: A Therapist's Guide* by Albert Ellis and Catherine MacLaren, as well as *Rational Behavior Therapy* by Maxie Maultsby. A fidelity checklist for the program is available on the BOP's internal website, along with reproducible RSA forms and a reproducible copy of the Five Rules for Rational Thinking. It appears successful completion of the program is based on attendance and participation. The program's anticipated outcome is a reduction in symptoms

associated with unhealthy cognitions, and in turn improved institutional adjustment, a reduction in misconduct, and ultimately reduced recidivism. Program outcomes are not formally measured, but incident reports and further program participation are potential intermediate outcome measures.

In the BOP's FSA Approved Programs Guide, the Basic Cognitive Skills Program is described as available at all institutions (BOP, 2023). At the close of FY 2023 the program was offered at 62 institutions (BOP, 2023). In calendar year 2021, 763 individuals were enrolled in the program and 1,248 individuals completed the program (BJS, 2022). At the close of FY 2023, there were 695 individuals participating in the program, up significantly from 439 individuals participating in the program at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, 9.76% of the BOP population with a cognitions need either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program.

7.2.5 Criminal Thinking Program

The Criminal Thinking Program is classified by the BOP as an EBRR Program (BOP, 2022). The cognitive-behavioral program is designed to "help the participant see how criminal thinking errors impact decisions in daily life" (BOP, 2022). The program was developed by the BOP and is consistent with cognitive-behavioral modules in other BOP programs, such as the Residential Drug Abuse Program (see Chapter 8) and Challenge Program. Program materials are produced by The Change Companies. The program is a companion intervention to the Basic Cognitive Skills Program, which is a prerequisite for this program. The stated goal of the program is to reduce criminality as fueled by criminal thinking errors. The target population for this program is individuals with cognitions needs, as well as antisocial peers needs. Individuals are likely referred to the program based on their MCCA score; however, a specific cutoff score for program referral is not identified in the program materials.

Per the BOP's internal website, the Criminal Thinking Program is delivered in a 10-session group format for minimum and low security individuals and a 20-session group format for medium and high security individuals (BOP, n.d.). The program can also be delivered in an individual format. As with the Basic Cognitive Skills Program, techniques from cognitive-behavioral therapy, including RSAs, are used to examine patterns of criminal thinking occurring across a range of situations. The gender-responsive curriculum and accompanying handouts are available in English and Spanish from The Change Companies. The interactive participant journal "reviews criminal thinking errors, provides education on the influence of thoughts and feelings on behaviors, and details how to conduct an RSA to improve decision-making" (BOP, 2022). The eight thinking errors addressed in the program are aligned with errors identified by Glenn

Walters, a former BOP psychologist. The errors include mollification, cutoff, entitlement, power orientation, sentimentality, superoptimism, cognitive indolence, and discontinuity (Walter, 1990). These thinking errors are consistent with the thinking errors addressed in other BOP program, including the BRAVE Program and Sex Offender Treatment Programs (see Chapter 9). The concepts and skills are taught via interactive journaling and practice, group session review, and between-session assignments. The BOP's internal website includes a reproducible copy of a Criminal Thinking Error List and the Five Rules for Rational Thinking (BOP, n.d.). In addition, the internal website references Turning Point Criminal Thinking handouts which were designed internally as in-cell materials for individuals in restrictive housing. Facilitators are offered the option of using these handouts as homework activities to supplement the Criminal Thinking Program. The internal website also offers a downloadable activity packet to further reinforce the concepts and terminology taught in the program.

As with the Basic Cognitive Skills Program, this program is facilitated by psychologists or mid-level clinical practitioners (e.g., treatment specialists, psychology interns) under the supervision of a psychologist and clinical training in REBT/RBT is required to facilitate the program. A fidelity checklist for the program is available on the BOP's internal website, along with reproducible RSA forms and a reproducible copy of the Five Rules for Rational Thinking. Facilitators are encouraged to read the previously referenced book by Ellis and MacLaren (1998) as well as the book *Rational Emotive Behavior* Therapy by Albert Ellis and D.J. Ellis and the book *The Criminal Lifestyle: Patterns of Serious Criminal* Conduct by Glenn Walters. Successful completion of the program appears to be based on attendance and participation. In addition to reducing symptoms of criminality, the program's anticipated outcomes are a reduction in misconduct and a reduction in recidivism. Program outcomes are not formally measured, but incident reports would be a reasonable intermediate outcome measure.

In the BOP's FSA Approved Programs Guide, the Criminal Thinking Program is described as available at all institutions (BOP, 2023). At the close of FY 2023 the program was offered at 73 institutions (BOP, 2023). In calendar year 2021, 572 individuals were enrolled in the program and 877 individuals completed the program (BJS, 2022). At the close of FY 2023, there were 1,034 individuals participating in the program, up significantly from 675 individuals participating in the program at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, 10.12% of the BOP population with a cognitions need either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program.

7.2.6 Emotional Self-Regulation Program

The Emotional Self-Regulation Program is classified by the BOP as an EBRR Program (BOP, 2022). The cognitive-behavioral program is designed to "help the participant to explore emotions and patterns of behavior and learn strategies for managing difficult emotions" (BOP, 2022). The program was implemented as a companion intervention to the Basic Cognitive Skills Program, and the Basic Cognitive Skills Program is a prerequisite for this program. The stated goal of the program is to reduce the symptoms of emotional dysregulation and to facilitate favorable institutional adjustment. The target population for this program is individuals with cognitions and mental health needs, with a focus on mood or anxiety disorders with mild to moderate symptom severity and adjustment disorders with mood or anxiety symptoms. Individuals are likely referred to the program based on their MCAA score and/or a DSM-5 diagnosis. The therapy protocol describes the program as ideal for CARE1-MH and CARE2-MH individuals. The BOP's internal website also notes the program may be of value for individuals presenting with a request for antidepressant or anxiolytic medications at intake or during a Psychology Services Open House (BOP, n.d.).

The Emotional Self-Regulation Program is a 24-hour program delivered weekly for at least two months in a group or individual format. In a group format, sessions are usually 90 minutes in length (PSB, 2018). These sessions involve an in-depth review of completed RSAs. Following completion of the program, the facilitator may elect to provide monthly maintenance sessions to review RSAs and reinforce REBT skills (BOP, n.d.). The program may also be offered as an open-ended therapy group. The gender-responsive curriculum and accompanying interactive participant journal are produced by The Change Companies and available in English and Spanish. The BOP's internal website also contains a therapy protocol for facilitators and a fidelity checklist for the program (BOP, n.d.; PSB, 2018). The program journal "explores helpful ways for the participant to respond to difficult emotions that lead to more positive interactions and outcomes" (BOP, 2022). The concepts and skills are best taught via interactive journaling and practice, group session review, and between-session assignments. The curriculum focuses on eight thinking errors, which mirror the thinking errors discussed in other BOP treatment programs, such as the Nonresidential Drug Abuse Program (see Chapter 8). Originally the program addressed ten thinking errors, but a 2018 revision reduced the thinking errors to eight. The eight thinking errors are: absolutes, "I can't", rhetorical questions, awfulizing, statements of facts, demands, loaded words, blaming (Psychology Services Branch, 2018). As with the Basic Cognitive Skills Program, skills practice is stressed. Participants are encouraged to complete at least three RSAs per week, over the course of at least one month, but usually much longer (BOP, n.d.).

As with the Basic Cognitive Skills Program, this program is facilitated by psychologists or mid-level clinical practitioners (e.g., treatment specialists, psychology interns) under the supervision of a psychologist and clinical training in REBT/RBT is required to facilitate the program. The BOP's internal website includes several resources for the program: the program protocol, adjunctive materials, a fidelity checklist, handouts of the thinking errors, Five Rules for Rational Thinking, and RSA forms. Facilitators are also encouraged to read the books by Albert Ellis and Catherine MacLaren and Maxie Maultsby referenced in the Basic Cognitive Skills Program, along with several peer-reviewed articles about the effectiveness of cognitive-behavioral interventions. BOP online learning opportunities are also referenced, specifically the "Fundamentals of Treatment" training modules offered to all staff working in Drug Abuse Programs (see Chapter 8). Successful completion of the program appears to be based on attendance and participation. In addition to improving institutional adjustment and reducing symptoms, the program's anticipated outcomes are a reduction in misconduct and a reduction in recidivism. Program outcomes are not formally measured; however, mental health care level could serve as a viable intermediate outcome measure.

In the BOP's FSA Approved Programs Guide, the Emotional Self-Regulation Program is described as available at all institutions (BOP, 2023). At the close of FY 2023 the program was offered at 24 institutions (BOP, 2022). In calendar year 2021, 241 individuals were enrolled in the program and 279 individuals completed the program (BJS, 2022). At the close of FY 2023, there were 222 individuals participating in the program, up significantly from 135 individuals participating in the program at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, 31.03% of the BOP population with a mental health need either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program.

7.2.7 Mindfulness-Based Cognitive Therapy Program

The Mindfulness-Based Cognitive Therapy Program is a PA Program "aimed at preventing symptom relapse in individuals who have a history of depression and anxiety" (BOP, 2022). The program is based on the work of psychologists Dr. Zindel Segal of the University of Toronto, Dr. Mark Williams of the University of Oxford, and Dr. John Teasdale, formerly of the University of Oxford, as described in their book *Mindfulness-Based Cognitive Therapy for Depression* (Segal et al., 2018). The stated goal of the Mindfulness-Based Cognitive Therapy Program is to reduce the symptoms of anxiety and depression. The target population for this program is individuals with a history of depression and anxiety and an associated mental health need. Referral procedures for the program are not clearly noted.

The Mindfulness-Based Cognitive Therapy Program is an 8-session, 16-hour group intervention (BOP, n.d.). The program supports daily practice of mindfulness skills and the use of cognitive-behavioral techniques to treat anxiety and depression. The protocol is based on the above referenced book, as well as a participant workbook by the authors, *The Mindful Way Workbook: An 8 Week Program to Free Yourself from Depression and Emotional Distress* (Segal et al., 2014). The workbook is designed to function as a single resource for handouts, home practice sheets, and other content covered in the course. Weekly session topics include beyond automatic pilot, another way of knowing, coming home to the present – gathering the scattered mind, recognizing aversion, allowing things to be as they already are, seeing thoughts as thoughts, kindness in action, and what now. Guided meditation CDs, tools to track progress, and interactive reflection questions are included with the workbook. The BOP's internal website also has a link to download these materials if facilitators choose not to purchase the workbook (BOP, n.d.).

A series of meta-analyses have supported the effectiveness of Mindfulness-Based Cognitive Therapy in treating current depressive symptoms and preventing relapse following the resolution of a depressive episode (Goldberg et al., 2019; Kuyken et al., 2016; Chiesa & Serretti, 2011). However, these studies note methodological limitations of studies to date, as well as a relatively small number of studies testing the long-term effects of this therapy. In addition, the studies reviewed in these meta-analyses do not involve correctional populations.

In the BOP, the program is to be delivered by psychologists, with expertise in both cognitive-behavioral therapy and mindfulness practice (BOP, n.d.). The BOP's internal website includes a fidelity checklist for the program, which details minimum training requirements for providers. Successful completion of the program appears to be based on attendance and participation. The program's anticipated outcome is a reduction in the symptoms of depression and anxiety. Program outcomes are not formally measured; however, mental health care level could serve as an intermediate outcome measure.

In the BOP's FSA Approved Programs Guide, the Mindfulness-Based Cognitive Therapy Program is described as available at all institutions (BOP, 2023). At the close of FY 2023 the program was offered at 8 institutions (BOP, 2022). In calendar year 2021, 12 individuals were enrolled in the program and 31 individuals completed the program (BJS, 2022). At the close of FY 2023, there were 23 individuals participating in the program, consistent with the 22 individuals participating in the program at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, 4.33% of the BOP population with a mental health need either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program.

7.2.8 Circle of Strength Program

The Circle of Strength Program is a gender-specific, pre-treatment PA Program "designed specifically for inmates in Federal Detention Centers or other short-term settings" (BOP, 2022). The program "uses a structured format to provide information and resources…while encouraging social support among participants" (BOP, 2022). The program was developed within the BOP. The goal of the program is to offer support and guidance to individuals in short-term placements with cognitions, mental health and/or trauma needs; however, an individual does not have to present with one of these needs to participate in the program. The BOP's internal website notes the program is ideal for detainees who are having difficulty adjusting to their incarceration (BOP, n.d.). The program facilitator guide encourages recruitment of participants via flyers and staff referrals. Of note, the program appears to be offered at several non-detention centers, particularly at institutions for women (BOP, 2023). Interestingly the program shares some features with the Foundation Program, a pre-treatment program also offered in institutions for women.

The Circle of Strength Program is a 13-session, pre-treatment program consisting of a combination of presentations, class discussions, and homework assignments (PSB, n.d.). Although the program can be offered in an individual format, a group format is strongly encouraged to promote social support among participants. Per the facilitator guide available on the BOP's internal website, group sessions should last 60 minutes and not include more than 12 participants. Participants are seated in a circle, and group membership is open recognizing the high turnover in detention centers. Each session includes the following components: a welcome and commitment to action, a 15-minute presentation of a topic, a 20-25 minute activity or discussion related to the topic, and a closing commitment to action. Program modules address the following topic areas for men: adjusting to prison, anger management, financial stress, criminal thinking, effective communication, surrounding yourself with support, healthy sleep habits, learning to relax, building a daily routine, health/wellness, staying part of the family, substance use, and reentry (BOP, n.d.). Program modules for women address the following topic areas: adjusting to prison, anger, communication assertiveness, depression domestic violence, health/wellness, mothering, sexual abuse, sleep, spirituality, substance abuse, reentry, employment. The protocols are facilitated in an open groups format, and the topic areas are independent of one another and may be offered in any order. Resources for the program include gender-specific facilitator guides and participant handouts, made available to institutions via the BOP's internal website.

The program does not have a dedicated staff facilitator. According to the PSB facilitator guide, facilitators should be mental health clinicians. In addition to the primary facilitator, subject matter experts may join the group to assist with the presentation of special topics. No specialized

training is required to facilitate the course. Successful completion of the program appears to be based on attendance and participation. The program's anticipated outcomes, listed as benefits on the BOP's internal website, include the development of skills to adjust to initial incarceration, the acquisition of information about topics impacting their lives to include evidence-based, high quality resources available via BOP programs, self-help resources, and community supports, and the establishment of mutually supportive relationships during a potentially stressful time (BOP, n.d.). Program outcomes are not formally measured, but future program participation may serve as an intermediate outcome measure for participants who are eventually designated to a BOP institution.

In the BOP's FSA Approved Programs Guide, the Circle of Strength Program is described as available at all detention centers; however, at the close of FY 2022 the program was offered at 18 institutions, to include its apparent offering in several non-detention centers (BOP, 2022; BOP, n.d.). In calendar year 2021, 192 individuals were enrolled in the program and 411 individuals completed the program (BJS, 2022). At the close of FY 2023, there were 212 individuals participating in the program, up from 117 at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, it appears 12.71% of the BOP population who are presently housed in a detention center either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program.

7.2.9 Brief CBT for Suicidal Individuals Program

The Brief CBT for Suicidal Individuals Program is classified by the BOP as a PA Program designed to provide treatment for individuals at risk of suicide (BOP, 2022). This CBT program is based on the work of two psychologists: Dr. M. David Rudd of the University of Memphis and Dr. Craig Bryan of the University of Utah. The stated goal of the program is to reduce the risk of suicide and self-injurious behaviors. The target population for this program is individuals at risk for suicide. Per the BOP's internal website, the program is useful following a suicide attempt or a Suicide Risk Assessment suggesting moderate-high risk for suicide (BOP, n.d.). If an individual is placed on suicide watch, the protocol may be initiated before an individual is removed from suicide watch or shortly thereafter. *Program Statement 5324.08 Suicide Prevention Program* details procedures to identify at-risk individuals and conduct suicide risk assessments, ensuring appropriate individuals can be targeted for this program (Psychology Services Branch, 2007).

The Brief CBT for Suicidal Individuals Program is a 20-hour treatment program, applicable for individual or group administration. The program begins with "a focus on crisis intervention and the development of a safety plan, as well as the development of cognitive strategies to help modify negative thoughts that can lead to self-directed violent behaviors" (BOP, 2022). The protocol is described in the book *Brief Cognitive-Behavioral Therapy for Suicide Prevention* by M.

David Rudd and Craig Bryan. Per the BOP's internal website, "the treatment requires identifying contributors to the suicidal mode and then focusing on changing those specific factors" (BOP, n.d.). The treatment protocol is divided into phases. In phase one, treatment providers are to conduct a risk assessment, develop a cognitive-behavioral conceptualization, engage in safety planning and crisis response planning, ensure means restriction, and facilitate the development of basic distress tolerance and emotional regulation skills. In phase two, facilitators focus on cognitive restructuring to undermine a suicidal belief system and continued skills training to refine emotion regulation, distress tolerance, and problem solving. Of note, the cognitive restructuring techniques used rely on the thinking errors and RSAs used in other BOP programs referenced in this chapter, i.e., BRAVE, Basic Cognitive Skills, and Criminal Thinking Programs. In phase three, the final phase of the program, facilitators educate the individual about relapse prevention and the associated treatment tasks. The complete treatment protocol is provided on the BOP's internal website. In addition, the website contains protocol supports, i.e., objectives by treatment phase, fidelity checklists, and an emotions handout. Spanish translations of participant handouts and clinician scripts are also available on the website.

A systematic review and meta-analysis by Tarrier et al. (2007) examining the effectiveness of cognitive-behavioral interventions to reduce suicide behavior noted a highly significant effect overall for CBT in reducing suicide behavior. They went on to conclude: "Subgroup analysis indicates a significant treatment effect for adult samples (but not adolescent), for individual treatments (but not group), and for CBT when compared to minimal treatment or treatment as usual (but not when compared to another active treatment). There was evidence for treatment effects, albeit reduced, over the medium term. Although these results appear optimistic in advocating the use of CBT in ameliorating suicidal thoughts, plans, and behaviors, evidence of a publication bias tempers such optimism." Research specific to a correctional population was not included in the systematic review and meta-analysis.

According to the BOP (2022), the program is facilitated by psychologists. The BOP provides formal training in the intervention via a 24-hour course facilitated by Dr. David Rudd, the program's co-developer. Per the BOP's internal website, "progression through the protocol is competency based and inmates must master skills associated with each phase of treatment prior to moving to the next phase" (BOP, n.d.). The anticipated outcome of the program is a reduction in the risk of suicide, typically accompanied by a reduction in the symptoms of a mental illness and the acquisition of coping skills. Although outcome data is not formally collected, a reduction in the need for suicide risk assessments would be a viable and accessible outcome measure.

In the BOP's FSA Approved Programs Guide, the Brief CBT for Suicidal Individuals Program is described as available at all institutions (BOP, 2023). At the close of FY 2023 the program was offered at 8 institutions (BOP, 2023). In calendar year 2021, no individuals were enrolled in the

program and 1 individual completed the program (BJS, 2022). At the close of FY 2023, there were 11 individuals participating in the program, up from 4 individuals participating in the program at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, .70% of the BOP population with a mental health need either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program, or why this program appears to be significantly underutilized given the need for suicide prevention efforts in a correctional setting.

7.2.10 CBT for Eating Disorders Program

The CBT for Eating Disorders Program is a PA Program designed to provide "assessment, stabilization, and education for individuals who have been diagnosed with an eating disorder" (BOP, 2022). The program is based on the work of Dr. Christopher Fairburn of the University of Oxford as described in his two books *Cognitive Behavioral Therapy and Eating Disorders* and *Overcoming Binge Eating* (Fairburn, 2008; Fairburn, 2013). The protocol is described as an empirically supported treatment employing a "transdiagnostic theory of eating disorders" (BOP, n.d.). The stated goal of the program is to effectively treat the symptoms of an DSM-5 eating disorder. The target population for this program is individuals with an eating disorder and an associated mental health need. Individuals are referred to the program based on a DSM-5 diagnosis of an eating disorder.

The CBT for Eating Disorders Program consists of 20-40 1-hour sessions. Although the FSA Approved Programs Guide indicates the program can be provided in an individual or group format, the BOP's internal website describes the program solely as an individual intervention. The program focuses on "behavioral monitoring, body image concerns, and the development of new skills" (BOP, 2022). The program is divided into four phases: "assessment, stabilization, and education; behavioral monitoring; addressing concerns that maintained the program such as body image; and maintenance of new skills" (BOP, n.d.). Dr. Fairburn's book, *Cognitive Behavior Therapy and Eating Disorders*, includes chapters for key program components, including chapters addressing the following themes: starting well; achieving early change; taking stock and designing the rest of treatment; shape concern, shape checking, feeling fat and mindsets; dietary restraint, dietary rules and controlling eating; events, moods and eating; underweight and undereating; and ending well (Fairburn, 2008). Dr. Fairburn's other book, *Overcoming Binge Eating: The Proven Program to Learn Why You Binge and How You Can Stop,* includes chapters for key program components related to binge-eating interventions: getting ready; starting well; regular eating; alternatives to binge eating; problem solving; taking stock; dieting; body image; and ending well (Fairburn, 2013). The BOP's internal website suggests the use of pre/post-test measures within the program, specifically, the Eating Disorder Examination (EDE), a structured clinical interview, or the Eating Disorder Examination Questionnaire (EDE-Q), a self-report questionnaire based

upon the EDE (Fairburn et al., 2014). The BOP's internal website also includes links to program handouts and assessments.

A 2017 systematic review and meta-analysis by Linardon et al. suggested CBT is an effective treatment intervention for the treatment of bulimia nervosa and binge eating disorder; however, the researchers also noted many of the 79 RCTs reviewed were of poor quality noting the need for additional quality research in this area before drawing firm conclusions. Linardon et al.'s work did not reference the use of correctional populations in the studies reviewed.

According to the FSA Approved Programs Guide, program facilitators should be mental health clinicians (BOP, 2023). Links to facilitator training resources are provided on the BOP's internal website, i.e., the two books published by Dr. Fairburn. Successful completion of the program appears to be based on regular participation in individual or group therapy sessions, as well as favorable results on post-test measures. The program's anticipated outcome is a reduction in the symptoms of an eating disorder/binge eating. Intermediate program outcomes are not formally measured, but periodic re-administration of the above assessment instruments could serve as intermediate outcome measures, as could weight, vital signs, lab values, and mental health care levels.

In the BOP's FSA Approved Programs Guide, the CBT for Eating Disorders Program is described as available at all institutions (BOP, 2023). At the close of FY 2023 the program was not offered at any institutions (BOP, 2023). In calendar year 2021, no individuals were enrolled in the program and no individuals completed the program (BJS, 2022). At the close of FY 2023, there were no individuals participating in the program, nor were there any individuals participating in the program in FY 2022. A single individual in BOP custody is noted to have completed the program. It is not clear why this program is not being offered.

7.2.11 CBT for Insomnia Program

The CBT for Insomnia Program is a PA Program "designed to help identify maladaptive thoughts and behaviors that can lead to persistent insomnia" (BOP, 2022). The program is based on the work of psychologist Dr. Michael L. Perlis of the University of Pennsylvania, nurse practitioner Dr. Carla Jungquist of the University of Buffalo, psychologist Dr. Michael T. Smith of Johns Hopkins University, and psychologist Donn Posner of Stanford University School of Medicine as described in their book *Cognitive Behavioral Treatment of Insomnia: A Session by Session Guide* (Perlis et al., 2005). The stated goal of the CBT for Insomnia Program is to support healthy sleep patterns. The target population for this program is individuals with a sleep disturbance, i.e., insomnia and an associated mental health need. Referral procedures are not explicitly described, but self-reported sleep disturbances are likely how individuals are identified for program participation.

The CBT for Insomnia Program is a 4-8 session treatment protocol for individuals with sleep disturbances (BOP, n.d.). The program includes the following components: "assessment, motivational strategies, patient education, behavioral treatments for insomnia, and cognitive approaches to decrease anxiety about sleep" (BOP, n.d.). Sessions are offered weekly on either an individual or small group basis. Specific session topics vary, based on individual needs; key topics addressed include good sleep hygiene, cognitive restructuring of catastrophic thoughts, maintenance of sleep diaries, and the use of sleep medications. Per the BOP's internal website (n.d.), the protocol and a video of sample sessions is available for purchase from the authors or may be obtained from the PSB.

A 2019 meta-analysis by van der Zweerde et al. suggested cognitive behavioral therapy for insomnia is an effective intervention in addressing the severity of insomnia, sleep onset latency, and sleep efficiency. While these effects decline over time, clinically significant effects were noted up to 12 months after therapy. Of note, this meta-analysis did not appear to include any correctional populations.

According to the FSA Approved Programs Guide, facilitators should be mental health clinicians (BOP, 2023). Links to facilitator training resources and the referenced book, *Cognitive Behavioral Treatment of Insomnia: A Session by Session Guide,* are also provided on the BOP's internal website. Successful completion of the program appears to be based on attendance and participation. The program's anticipated outcome is a reduction in the symptoms of insomnia and other sleep disturbances. Program outcomes are not formally measured; however, self-reports of sleep quality and mental health care levels might serve as intermediate outcome measures.

In the BOP's FSA Approved Programs Guide, the CBT for Insomnia Program is described as available at all institutions (BOP, 2023). At the close of FY 2023 the program was offered at 8 institutions (BOP, 2023). In calendar year 2021, 20 individuals were enrolled in the program and 20 individuals completed the program (BJS, 2022). At the close of FY 2023, there were 16 individuals participating in the program, up from 11 individuals participating in the program at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, 3.54% of the BOP population with a mental health need either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program.

7.2.12 CBT for Prison Gambling Program

The CBT for Prison Gambling Program is a PA Program "designed to help individuals assess their prison gambling behavior and to develop the commitment to quit" (BOP, 2022). Research efforts

to identify the prevalence of problem gambling in prison have yielded varying results. In their systematic review, Banks et al. (2020) found prevalence rates ranging from 5.9% to 73% in a correctional population. Whereas Williams et al. (2005) found an average prevalence rate of 33% across 27 studies in Australia, the United Kingdom, New Zealand, and the United States.

Originally, the BOP conducted field trials of gambling treatment models from the UCLA and University of Calgary; however, these models suggested moderate gambling might be an appropriate goal, which is not accurate in a prison setting, and the examples also tended to focus on gambling activities not common in a prison setting (PSB, n.d.). To address these limitations, the PSB adapted the workbooks to apply more directly to gambling activities by incarcerated individuals. Specifically, abstinence was identified as the only appropriate goal, and casino gambling examples were replaced with sports betting and dice games often found in prison. The stated goal of the CBT for Prison Gambling Program is to eliminate problem gambling. The target population for this program is individuals with a gambling problem and cognitions and antisocial peers needs. Individuals who have received incident reports for gambling while in prison or who self-report gambling problems are appropriate candidates for this program.

The CBT for Prison Gambling Program is a 20-hour, self-guided program. Resources for the CBT for Prison Gambling Program include four cognitive-behavioral handouts with journaling activities totaling 36 pages, made available to institutions via the BOP's internal website (BOP, n.d.). The first two handouts guide participants through a series of activities to evaluate their preferred forms of prison gambling and to review the benefits and negative consequences of gambling in their lives (PSB, n.d.). The last two handouts teach participants about thinking errors underlying prison gambling, specifically super-optimism and power orientation. The final handout also includes an opportunity to request additional services.

A recent meta-analysis by Pfund et al. (2023) drew the following conclusions about the efficacy of cognitive-behavioral therapies in the treatment of gambling problems: "Cognitive-behavioral techniques are a promising treatment for reducing gambling disorder and gambling behavior; however, the effect of cognitive-behavioral techniques on gambling disorder severity and gambling frequency and intensity at post-treatment is overestimated, and cognitive-behavioral techniques may not be reliably efficacious for all individuals seeking treatment for problem gambling and gambling disorder" (p. 1). In addition, this meta-analysis did not include studies involving correctional populations.

As noted above, the handouts are primarily self-guided, but motivational enhancement and clinician feedback may be incorporated into the program (BOP, n.d.). The PSB's *Prison Gambling: Self-Guided CBT Protocol* notes the program can be supplemented by also offering the Criminal Thinking Program and/or by offering the *Freedom from Problem Gambling: Self-Help Workbook*

developed by UCLA and based on the *Becoming a* Winner workbook from the University of Calgary (PSB, n.d.; Wong & Rosenthal, 2014; Hodgins & Makarchuk, 2000). Successful completion of the program is based on completing all four handouts; however, the PSB protocol notes it is not expected that these handouts alone will remedy the problem. To increase the likelihood of behavior change, psychologists are encouraged to supplement the self-guided materials with a small number of motivational psychotherapy sessions and/or to enroll the individual in the Criminal Thinking Program. Pre-test and post-test knowledge measures are included in the first and fourth handouts and a favorable score on the post-test knowledge measure is linked to successful program completion. Longer-term program outcomes are not formally measured; however, tracking incident reports for gambling could serve as an intermediate outcome measure for the program.

In the BOP's FSA Approved Programs Guide, the CBT for Prison Gambling Program is described as available at all institutions (BOP, 2023). At the close of FY 2023 the program was offered at 28 institutions (BOP, 2023). In calendar year 2021, 198 individuals were enrolled in the program and 576 individuals completed the program (BJS, 2022). At the close of FY 2023, there were 99 individuals participating in the program, down from 125 individuals participating in the program at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, 4.30% of the BOP population with a cognitions need either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program.

7.2.13 Start Now Program

The final program in this chapter, the Start Now Program, is a PA Program supported by the WSPB. The program is designed to treat individuals with behavioral disorders and associated behavioral problems. Originally developed at UCONN as an intervention for adolescent females in criminal justice settings, the program has been expanded and refined to serve a broader correctional population. Program development was funded by the National Institute of Justice to explore the feasibility of offering dialectical behavior therapy interventions in a corrections environment (Sampl et al. 2015). The program uses a strengths-based approach applying "an accepting and collaborative clinical style" and placing "the primary responsibility for change on the individual" (BOP, 2022). The stated goal of the program is to reduce behavioral problems. The target population for this program is women with behavioral disorders and an anger/hostility and/or cognitions need, which is why the program is supported by the WSPB. However, of note, a male version of the program is now made available to staff via Sallyport. The procedures for referring an individual to the Start Now Program are not clearly described in available resources.

The Start Now Program is a 32-hour program consisting of a combination of presentations, interactive groups and journaling, and homework assignments. Sessions may be delivered twice weekly over 16 weeks or once per week over 32 weeks; however, twice weekly sessions are the recommended protocol. As noted above, the program was originally developed at the Department of Correctional Managed Health Care, University of Connecticut. According to Kersten et al. (2016), "the focus of the intervention is on (1) increasing self-control over impulses, (2) enhancing emotion recognition and regulation, (3) making judgements and decisions on the basis of consequences and (4) improving stress management and coping skills." The program combines elements of cognitive-behavioral therapy, motivational interviewing, dialectical behavior therapy, and trauma-informed care. Four gender-responsive Start Now Program modules are available in the public domain on the Carilion Clinic website, a not-for-profit health care organization based in Roanoke, VA. The first module, entitled My Foundation: Starting with Me, teaches the skill of focusing and the ABC's of cognitive-behavioral therapy. Module two, entitled, My Emotions: Dealing with Upset Feelings, addresses impulsive behaviors and coping skills for difficult emotions. Module three, My Relationships: Building Positive Relationships, focuses on the skills required for successful relationships. The final module, My Future: Continuing My Path to Success, addresses goal setting and problem solving specific to key reentry skills. Participant workbooks are psychoeducational and interactive. A series of program support resources are available on the Carilion Clinic website, to include a facilitator workbook/manual, facilitator training presentation (video), quality assurance forms for observed sessions, a knowledge test for facilitators.

According to the BOP (2022), the program may be facilitated by a variety of staff, including special programs coordinators, Education, Health Services and Unit Team staff, psychologists, treatment specialists, contractors, and volunteers. As noted above, facilitator training resources are available on the Carilion Clinic website, but staff are not required to complete these training certification procedures. The certification training requires facilitators to read the facilitator manual and participate in two days of live training (Sampl et al., 2015). Information available to staff on Sallyport indicates experience in a correctional setting and counseling experience are desirable for program facilitators. Resources in the facilitator guide include quality assurance measures as well as recommended outcome measures to track program effectiveness. These measures include behavioral indicators, such as disciplinary infractions, as well as a suggested self-report instrument, the Buss-Perry Aggression Scale. Successful completion of the program appears to be based on attendance and participation alone. The program's anticipated outcome is a reduction in the symptoms and negative consequences of a behavioral disorder. As noted above, suggested outcome measures are included in the facilitator's manual, but use of these measures is not mandated.

In the BOP's FSA Approved Programs Guide, the Start Now Program is described as available at all institutions; however, at the close of FY 2022 the program was offered at 29 institutions (BOP, 2023). In calendar year 2021, 162 individuals were enrolled in the program and 249 individuals completed the program (BJS, 2022). At the close of FY 2023, there were 842 individuals participating in the program, up very significantly from 118 individuals participating in the program at the close of FY 2022 (BOP, 2023; BOP, 2022). At present, 4.51% of the BOP population with a cognitions need either (1) are enrolled in the program or (2) have completed the program since implementation of the FSA (BOP, 2023). It is not clear whether there is a waiting list for this program.

7.3 Study Identification Procedures

To create our study database, we first examined all published meta-analyses and systematic reviews of prison-based CBT programs for mental and behavioral disorders published during our review period (2000-present). Fourteen meta-analyses and systematic reviews were identified (see Appendix Table 7A for an overview). As noted in Chapter 1, a strong argument can be made evaluations of prison-based CBT programs operating in the 1990's and earlier are not relevant today, because of changes over time in program design components and incarcerated populations. In fact, many of the programs addressed in this chapter were developed in the 2000's and later. Our review of these meta-analyses and systematic reviews did reveal several studies conducted since 2000; we included these studies in our review.

The next step in our study identification process was to determine whether these meta-analyses and systematic reviews perhaps missed relevant evaluations due to the search procedures employed; or excluded them from their review due to their study inclusion criteria. To address this issue, we conducted a systematic search of the following electronic databases:

- APA PsycInfo
- Complementary Index
- Academic Search Premier
- MEDLINE
- Criminal Justice Abstracts
- CINAHL Plus with Full Text
- Gale Academic OneFile
- National Criminal Justice Reference Service Abstracts
- Gale OneFile: Health and Medicine
- Gale General OneFile
- Supplemental Index

- Education Research Complete
- Gale Academic OneFile Select
- Springer Nature Journals
- Books at JSTOR
- Research Starters
- APA PsycArticles
- Gale Health and Wellness
- Business Source Complete
- ScienceDirect
- Gale in Context: Science
- Gale OneFile: High School Edition
- IEEE Xplore Digital Library
- Regional Business News
- ERIC
- Gale OneFile: News
- Historical Abstracts
- Political Science Complete

We used the following specific terms for our systematic search of electronic databases:

cognitive behavioral therapy AND prison or jail or incarceration or imprisonment or correction facilities NOT youths or young people or adolescents or teenagers

This search initially yielded 880 hits, with a list of 594 studies once duplicates were removed from the database. Visual inspection of the titles and abstracts by the research team further reduced the number of potential studies to 110 titles requiring in-depth review. Specifically, we focused on studies that included one of the outcomes measures described in Chapter 1 (i.e., recidivism reduction, misconduct reduction, improved institutional adjustment, skills acquisition) and identified a control group for comparison.[1]

[1] Some programs initially ranked by the research team as meeting minimum quality standards were later found to include a non-equivalent comparison group. We discuss this issue in our findings section.

The majority of the 110 studies we examined in-depth did not meet our review criteria and were excluded. A total of 40 studies were identified for inclusion in our review, which include 25 evaluations ranked level 3 or above in design quality, and 15 evaluations using lower quality research designs (1 or 2). See Appendix Table 7B for an overview of these studies.

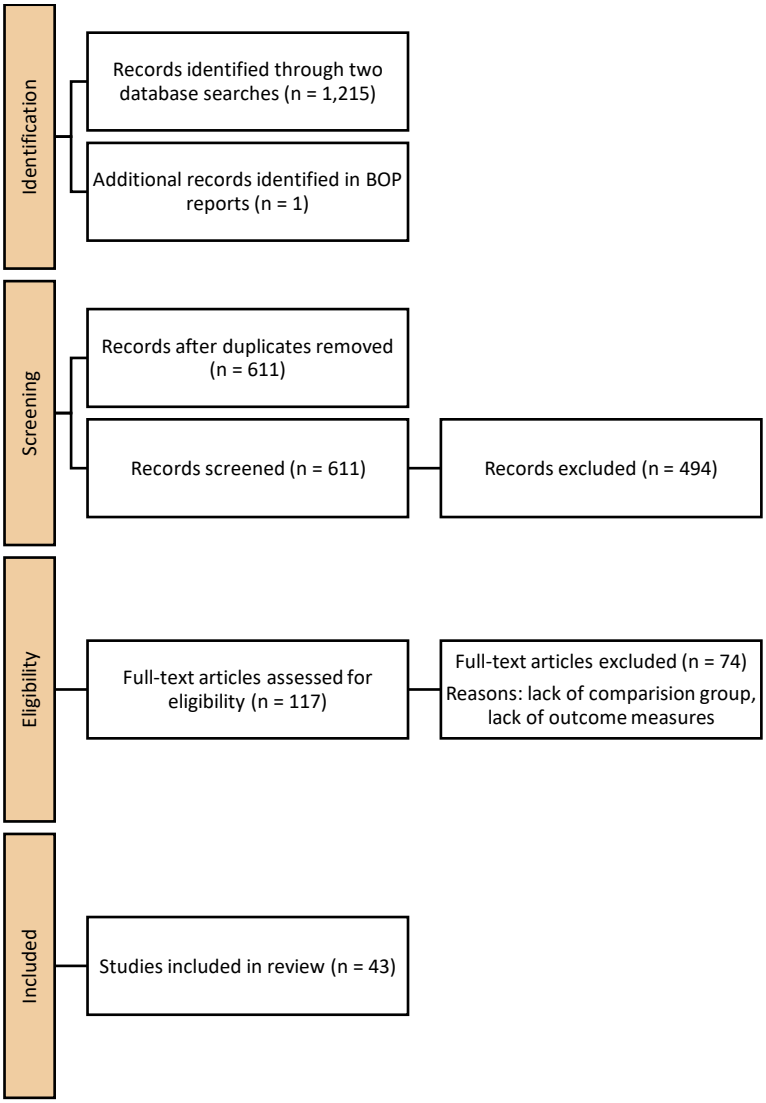
In addition, we decided to conduct a separate search, in the same series of databases, for anger management program evaluations. The following search terms were used in this second search:

anger management AND prison or jail or incarceration or imprisonment or correction facilities NOT youths or young people or adolescents or teenagers AND recidivism or reoffending or repeat offender.

This search initially yielded 335 hits, with a list of 17 studies once duplicates were removed from the database. Visual inspection of the titles and abstracts by the research team further reduced the number of potential studies to 7 titles meeting our initial review criteria and requiring in-depth review. In addition, one meta-analysis of 96 anger management programs utilizing 9 distinct program models (Saini, 2009) was also identified at this stage and reviewed (see Appendix Table 7A); only 4 of the 12 corrections studies included in this review were conducted post-2000. This secondary search added 3 previously unidentified studies to our database.

Based on our review of the studies included in the fifteen meta-analyses and systematic reviews highlighted in Appendix Table 7A, along with the results of our two searches of electronic databases, we identified 43 evaluations of prison-based CBT programs for mental and/or behavioral disorders from the period 2000 to 2022 that meet our review criteria (see Appendix Table 7B for an overview of each study).

Flowchart of Study Identification Procedures



7.4 Evaluations of CBT Programs for Mental and Behavioral Disorders Inside the BOP

Our search only identified one evaluation of a BOP program that was completed during our review period: Chris Innes' evaluation of BOP's BRAVE Program (Innes, 2000). A level 3 quasi-experimental design was employed to compare 289 BRAVE Program participants to a matched comparison group of incarcerated individuals admitted to the facility at the same time who did

not participate in the program[2]. Positive results were reported, including significantly lower rates of misconduct for both participants (24.2% lower rate of misconduct) and completers (53.1% lower rate of misconduct). Lower placement rates and lengths of stay in secure housing units (SHUs) were also reported. We hesitate to rate the BRAVE Program as ***promising*** based on a single level 3 study conducted over two decades ago.

BOP has begun to address this evaluation need. They began an internal evaluation of the BRAVE Program at the end of FY 2021; it is described as a joint internal evaluation being conducted Office of Research Evaluation (ORE)in conjunction with the Psychological Services Bureau (PSB). The evaluation is focused on both in-prison outcomes (such as reduction in mental health crises, disciplinary actions, and other measures of institutional adjustment), and post-release outcomes (recidivism). We did not have the opportunity to view any preliminary findings, but data analysis is currently ongoing, and a final report will be available in FY 2026 according to BOP.

In the interim, the positive findings reported for BOP's BRAVE Program now need to be viewed in conjunction with the available state-level evaluation research on programs that appear to be similar to the BRAVE Program. We examine these studies in the following section.

In addition to these internal evaluations, BOP has currently contracted with Texas Christian University to evaluate several of their CBT-based programs, including its Anger Management Program. The Anger Management Program evaluation was started in FY 2021, and it is scheduled to be completed in FY 2024. The evaluation will purportedly include an assessment of both intermediate, in-prison outcomes (e.g., reductions in ager, disciplinary actions) and post-release recidivism. The BOP has also contracted with Rutgers University to evaluate the effectiveness of its Criminal Thinking Program, with a target completion date of FY 2028. The BOP also plans to initiative evaluations of the Basic Cognitive Skills Program in FY 2023 and the Emotional Self-Regulation Program in FY 2026.

[2] Unfortunately, sophisticated matching techniques were not used by the researcher. Individuals selected for the comparison group met the criteria used for placement in the BRAVE program.

7.5 Evaluations of CBT Programs for Mental and Behavioral Disorders Outside BOP

We begin our review CBT program evaluations conducted outside of BOP by summarizing the results of the meta-analyses and systematic reviews conducted during our review period. Appendix Table 7A presents the key findings from these reviews. Overall findings from these reviews are positive, both in terms of in-prison and post-release outcomes. However, a few critical caveats are in order when considering whether these meta-analyses and systematic reviews can be used to inform decisions about the effectiveness of prison-based CBT programs. First, many of the studies included in these reviews were conducted prior to 2000. Second, several of these reviews included both prison-based studies and community-based studies. Third, many of these reviews included both adult and juvenile populations. And fourth, the outcome measures included in most of the evaluations highlighted in these reviews focused on in-prison behavior (i.e., rates of overall and violent misconduct, and changes in mental health). Data on post-release recidivism and/or other post-release adjustment measures were examined in only 6 of 17 meta-analyses and systematic reviews included in Appendix Table 7A.

These caveats notwithstanding, it can be reported that the bulk of the evaluation research does support the use of a variety of CBT techniques for anger management, to improve basic cognitive skills, to address criminal thinking, and for emotional self-regulation. Several CBT programs were found to improve in-prison mental health, and/or reduce institutional misconduct and prison violence (see, e.g., Autry et al., 2017). Evidence supporting the significant, albeit modest, post-release recidivism reduction effects[3] of various CBT treatment programs is found in the following seven meta-analyses and systematic reviews: Thekkumkara et al., 2022; Beaudry et al., 2021; Landenberger and Lipsey, 2005; Wilson et al., 2005; Pearson et al., 2002; Ferguson and Wormith, 2012; and Henwood et al., 2015). However, it would be a mistake to rely solely on these meta-analyses and systematic reviews to decide whether a specific BOP program can be described as

[3] Beaudry and colleagues' 2021 review of 29 RCTs of psychological interventions in prisons and jails offered evidence that the authors of other meta-analyses have likely overestimated the recidivism reduction effects of CBT programs by including smaller studies (with less than 50 total participants). Their review revealed that when the smaller RCT studies were excluded, there was no significant reduction in recidivism. This finding that 'size matters' certainly raises questions about how we assess the available evidence-base for CBT and other prison programs.

evidence based. This determination requires an examination of only adult, prison-based CBT program evaluations conducted during our review period.

Appendix Table 7B presents the results of 43 separate adult, prison-based CBT program evaluations conducted since 2000. Sixteen [16] of these evaluations were randomized control trials (RCTs), but several had design limitations related to either small sample size or length of follow-up. Four of these 16 RCTs attempted to measure post-release criminal behavior (Sacks et al., 2012; Sacks et al., 2008; Sacks, 2004; and Khodayarifard, 2010), while 3 studies included measures of post-release mental health (Sacks et al, 2012; Sacks et al., 2008; and Zlotnick et al., 2009). This leads us to conclude that very little high-quality evaluation research on either post-release mental health effects or the recidivism reduction effects of participation in prison-based CBT programs has been conducted since 2000. A similar assessment applies to the quasi-experimental CBT evaluation research conducted in prison settings during this same review period. Appendix Table 7B includes nine level 3 and two level 2 quasi-experiments. Only three of the nine level 3 studies included recidivism measures (DiPlacido et al., 2006; Polaschek, 2011; Polaschek et al., 2005); one of the two level 2 studies (Friendship et al., 2003) included a recidivism measure. Finally, Appendix Table 7B includes 13 level 1 studies. While of low quality, we include them here to in an attempt to find any (and all) CBT evaluation research evidence that measures post-release outcomes. Only two of these level 1 studies included a post-release recidivism measure (Lester et al., 2020; and Zlotnick et al., 2003).

The body of the evaluation research on the recidivism reduction effects of CBT programs conducted in prison settings is mixed[4]. There is evidence from several studies that participation in – and completion of – prison-based CBT programs is associated with lower recidivism[5]. However, there were also several studies reporting either mixed effects or null effects. Due to these mixed findings, and the small number of studies conducted during our review period, we cannot offer a definitive statement on the recidivism reduction effects of CBT programs.

We do have sufficient evaluation research to assess the effectiveness of these programs on a variety of *intermediate* outcomes related to in-prison mental health and in-prison behavior. It is

[4] Of the 40 studies we summarize in table 18, ten include a recidivism outcome measure: 3 RCTs, 4 quasi-experiments, and 2 studies using non-experimental designs.
[5] 3 of the 4 RCTS reported that participation in the CBT program resulted in statistically significant reductions in recidivism. However, 3 of these evaluations were focused on the same program.

our view that it is appropriate to classify one or more of BOP's CBT-based treatment programs as effective/evidence-based if they are found to achieve these intermediate outcomes, even though there is limited high quality evaluation research available on their impact on post-release behavior.

Absent the evaluation research findings on BOP's own programs (except for the BRAVE Program), we must rely on the results from evaluations of similar CBT programs conducted in prisons and jails. We present our review of this body of research by grouping CBT evaluations as follows: BRAVE Program, Challenge Program and anger management; basic cognitive skills; emotional self-regulation/suicide prevention; CBT for criminal thinking; mindfulness-based CBT; and CBT for eating disorders, insomnia, or gambling.

7.5.1 Prison Programs Designed to Reduce Misconduct Using BRAVE and Challenge Program-based Strategies and/or Anger Management

We included nine evaluations of programs designed to reduce misconduct in prison using CBT techniques. These evaluation findings offer research evidence that can be applied to BOP's BRAVE, Challenge, and Anger Management Programs. Three of these evaluations were randomized control trials (Hogan et al., 2012; Vannoy and Hoyt, 2004; and Hutchinson, 2017). Only one of the three RCTs examined the impact of the program on misconduct; in this study, the results were mixed (Hogan et al., 2012). The other two RCTs included here focused on pre-post changes in scores on various anger subscales. We briefly summarize these three studies below.

Hogan et al. (2012) evaluated a program conducted in a Midwest prison called Cognitive Housing Approach: New Goals Environment (CHANGE). The CHANGE program targeted high-risk problem incarcerated individuals requiring higher security. According to the research team, "*Phase I was designed to last 6 to 8 weeks with participants attending 2-hour sessions twice weekly. Groups consisted of six to eight inmates that were facilitated by two trained staff members, one a correctional officer and the other a case manager. Basic concepts and techniques of cognitive change were introduced describing what cognitive self-change was and how thinking errors affect attitudes, beliefs, and thinking patterns"* (2012, 376). To assess program effectiveness, official misconduct reports were compared at 3-months and 6-months after completion of phase 1, the program's required component. There were no statistically significant differences in misconduct rates between the treatment and control groups at either follow-up point. However, there were differences in violent misconduct reports at the 6-month follow-up point.

Vannoy and Hoyt (2004) conducted their modest RCT at a low security Midwestern prison. The study sample was very small; there were 16 subjects in the treatment group and 15 in the waiting list control group. According to the researchers, "An anger therapy intervention was developed

for incarcerated adult males. The therapy [12-week program, one 1.5-hour session each week] was an extension of cognitive-behavioral approaches, incorporating principles and practices drawn from Buddhist psychology" (2004, 39). Rather than look at the impact of the program on institutional misconduct, the researchers conducted pre-post comparisons of scores on scales measuring both anger and empathy. The treatment group performer better than the control group for "3 of the 5 state and trait anger subscales" (2004, 50).

Hutchinson and colleagues (2017) conducted a small, multi-site RCT of an anger management program operating in four Caribbean prisons on the island of Trinidad. There was a total of 85 participants (59 in treatment group, 26 in the control group). Researchers noted that the participants in this study included men, women, and male young adult incarcerated individuals: "Participants were recruited from among inmates in four prisons in Trinidad: a (male) maximum security prison, male and female general prisons, and a (male) young offenders' institution" (2017, 3). The intervention included 12 two-hour sessions using a manualized anger management program originally designed for individuals with mild intellectual disabilities. Following the same measurement strategy as Vannoy and Hoyt (2004), no outcome data were collected on the impact of this program on institutional misconduct. The effectiveness of the anger management program was measured by pre-post comparisons of score on selected scales measuring anger (state anger, trait anger, and anger expression), using a 4-month post program follow-up. Significant improvement in anger coping skills was reported, among participants in the experimental group with no changes in the control group. Unfortunately, pre-post comparisons were only available for 57 of the 85 program participants, reducing the size of the experimental and control groups even more (41 treatment vs. 16 controls).

We also reviewed the findings from 4 quasi-experimental studies (Innes, 2000; Polaschek, 2011; Polaschek, 2005; and Spiropoulos et al., 2005). As we noted earlier in the chapter, the Innes study focused on the impact of the BRAVE Program on misconduct; positive results were reported for this BOP Program, but post-release recidivism was not measured. However, other researchers have looked at post-release outcomes.

The two evaluations conducted by Polaschek and colleagues (2005, 2011) examined the impact of an intensive cognitive behavioral rehabilitation program targeting violent men in New Zealand's Rimutaka violence prevention unit. The program consisted of 330 hours of group sessions over 28 weeks. The researchers described the program as follows: "it was cognitive-behavioral and modular, with content that covered (a) identifying individual risk factors by examining index offense chains, (b) offense-supportive thinking, (c) mood management, (d) victim empathy, (e) moral reasoning, (f) problem solving, (g) communication and relationship skills, and (h) plan for post release risk management" (2011, 668). They used reconviction during a 3.5-year follow-up period as their primary outcome measure. In their 2011 study, the post-

release reconviction rates of 112 men in the treatment group were compared to a matched control group (n=112). For both completers and non-completers of this program, overall reconviction rates are very high (83% for treatment completers; 93% for non-completers). However, they fared better than a matched control group on both the any reconvictions and the violent reconviction measures. There was no difference between the treatment and control group for the subgroup of participants who did not complete the program. Overall effects combining all participants were not presented. Finally, the researchers argued that "the program was more effective with high-risk than medium-risk men, confirming correctional policy that denied men with less than a 40% risk of serious reconviction referral to the program" (2011,675).

The findings presented in the 2011 evaluation of the program were generally consistent with the findings from an earlier, much smaller evaluation of the same program by these authors (Polaschek et al., 2005). In the earlier study, 22 program participants who completed the program were compared to a matched sample of 60 non-participants. No statistically significant differences between treatment and control groups were found using the any reconviction or return to prison outcome measures (minimum 2-year post-release follow-up). However, they reported that "The rate of violent failure was significantly different, with 32% of the treatment group being reconvicted for a violent offense after release compared to 63% of the comparison group ($t = 2.6$, $p = .015$)" (2005, 1619).

The final quasi-experiment we reviewed in this area was conducted by Spiropoulos and colleagues (2005). The outcome measure of interest in this evaluation was prison misconduct. The evaluation includes assessments of two separate programs: Problem Solving and Pathfinders. The Problem-Solving program is relatively short in duration (4-5 half hour sessions) compared to other cognitive behavioral programs, which typically run for 3-4 months. In this program, "Offenders are taught to stop and think, identify the problem and goal, gather information and insight, indicate the choices and consequences of those choices, choose a course of action, plan this course of action, do this course of action, and evaluate the result" (2005, 75). The Pathfinders program is longer in duration, with 200 hours of instruction over 4 months. According to the research team, "Its focus on relationships and empowerment, however, brings it closer to needs outlined for women offenders than the typical, offender-based, cognitive-behavioral program. This program highlights the acceptance of differences among group members, the need for effective communication and trust, the importance of self-image and clarity of thinking, and the enhancement of moral values and empowerment" (2005, 75). For both men and women, the problem-solving group did better than the matched control group based on measures of psychological improvement, and prison misconduct. However, the findings reported here suggest that these two programs may have different effects on men and women. Treatment vs control group comparisons revealed that the problem-solving program significantly

reduced depression for men only, while the Pathfinders program significantly reduced depression for women participants.

One non-experimental studies (level 1 quality rating) evaluating prison-based anger management programs is also included in Appendix Table 7B (Kersten et al., 2016). This evaluation of the Start Now Program reported positive outcomes in terms of reduced disciplinary infractions by participants (Kersten et al., 2016).

Our overall assessment of this group of CBT programs is that while the in-prison program effects are promising, the post-release recidivism reduction effects of these programs are currently unknown.

7.5.2 Prison Programs Designed to Improve Basic Cognitive Skills

Appendix Table 7B includes 10 evaluations of basic cognitive skills programs[6], including 4 RCTs (Sacks et al., 2012; Sacks et al., 2008; Brazão, 2018; Brazão, 2015a,2015b), 5 quasi-experiments (Gobbett and Sellen, 2014; Mak and Chan, 2018; DiPlacido et al., 2006; Strah et al., 2018; and Friendship et al.,2003), and 1 study using a nonexperimental design (Lester et al., 2020). Five of these evaluations included recidivism outcomes, while the remaining studies measured in-prison outcome measures (infractions, mental health).

The 4 RCTs describe two program evaluations: one study (Sacks et al.,2008) was conducted at a women's prison, and it compared the effects of a residential therapeutic community to an outpatient cognitive behavioral treatment program; the other study (Brazão et al.,2018) examined the impact of the Growing Pro-Social (GPS) program (based in schema therapy) vs. the wait list control group, and it included men in Portuguese prisons, age 18-40. We describe the evidence of the effectiveness of both programs below.

Sacks and colleagues studied the effects of two different programs designed to address the problems of women in prison who have substance use disorders: a therapeutic community program called *Challenge to Change*, and the prison's existing cognitive behavioral intervention. The study setting for the randomized control trial (RCT) was a women's prison in Denver,

[6] One of these program evaluations is described in two separate published research articles; we include both study summaries in our review table (Brazão et al., 2015a, 2015b).

Colorado. The research team published their preliminary findings in 2008, and then provided a more detailed presentation of evaluation findings in 2012. According to the research team, "Over two thirds of study subjects received a lifetime diagnosis of severe mental disorder, nearly one-half received a diagnosis of PTSD, and virtually all reported exposure to trauma" (2008, 233). The outpatient cognitive behavioral change program was a 15-week course (2 days per week for 2 hours) that was completed in approximately 6-9 months. The Challenge to Change therapeutic community was a residential program, where participants stayed for an average of 6.5 months. In their preliminary evaluation, only 6-month post-release follow-up data were presented. The two groups showed similar improvement in mental health and substance use (no statistically significant differences between groups), but the Challenge to Change program participants had significantly lower rearrest rates (26% vs. 35%) than the participants in the cognitive behavioral program.

In their 2012 study, similar mental health outcomes were reported using a 12-month follow-up period, but there was no longer a statistically significant difference in re-arrests at the 12-month post-release point. However, the researchers reported a higher re-incarceration rate (18% vs 13%). Interpretation of these findings will vary depending on which recidivism measure is preferred recidivism reduction effects are based on the re-arrest criterion, then both programs had the same effect; if return to prison is the preferred metric, then the Challenge to Change program would be described as the more effective of the two interventions.

Brazão and colleagues conducted a randomized control trial (RCT) to assess the Growing Pro-Social (GPS) program being offered in several Portuguese prisons. The program is described as a "structured and manualized group program grounded in schema theory[7]and intervention methods…. [which] can be used as a first choice cognitive– behavioral program (to be delivered a few months after prison intake) along with other group and/or individual interventions programs addressing specific criminogenic needs. (Brazão et al., 2018, 58). The program was delivered by two therapists trained in schema therapy and cognitive-behavioral techniques; it included forty 90-minute sessions offered weekly. A group of adult males, age 18-40 were randomly assigned to the treatment and control groups. Treatment group participants attended the GPS program for 12 months and received treatment as usual (TAU); the control group participants received treatment as usual (TAU) only. They did not attend any other structured

[7] For details on schema theory and therapy, see Rafaeli et al., 2011).

intervention during the research period. Findings from this RCT focused only on in-prison outcomes. GPS program participants were found to have significantly fewer disciplinary infractions than their control group counterparts, not only during the program, but also during a 12-month follow-up period (while still incarcerated). The GPS group also showed improvement in several adjustment measures, while the control group showed either no change or lower adjustment scores.

Based on these two experiments, there is high quality empirical evidence of the in-prison effects of participation in both CBT programs, but we can offer no definitive assessment of post-release recidivism reduction effects of either program. Two of the five quasi-experiments do attempt to measure post-release recidivism outcomes. Both studies report that participation in CBT programs was linked to lower post-release recidivism (DiPlacido et al., 2006; Friendship et al., 2003).

DiPlacido et al. (2006) conducted a quasi-experimental evaluation of high-intensity cognitive behavioral programs[8] operating at the Regional Psychiatric Centre in Saskatoon, Saskatchewan, a maximum-security forensic mental health hospital that takes referrals from other correctional institutions. While the focus of this study was on gang members, non-gang members were also included. Both treated gang members and treated non-gang members were compared to a matched group of gang and non-gang members that were not in these programs[9]. While small sample size (n=40 in each of 4 groups) was noted as a study limitation, the researchers reported significant differences between treatment and control groups in both major institutional infractions and post-release recidivism (using reconviction and violent reconviction during a 2-year follow-up), with larger effects for gang members than non-gang members. However, because of the nature of the retrospective research design used, and the selection of the comparison group, we are not confident in the accuracy of the findings reported in this study.

A second quasi-experimental study of two CBT programs with post-release outcomes was conducted in the United Kingdom by Friendship et al. (2003). The two programs under review

[8] Participants in any one of three different CBT programs were included in the retrospective experimental group: in the treatment group: the ABC program, the Clearwater program, and PsyReh program. Program descriptions are found in the Appendix of the study (pp.11-12).

[9] One critical caveat is offered by the researchers: "The untreated matched comparison gang and nongang groups were not truly untreated as they simply received a shorter duration of treatment than the treated groups or were admitted for assessment only" (2006, 107).

were the Reasoning & Rehabilitation program[10], and Enhanced Thinking Skills[11]. Results offer tentative support for these two CBT programs. Researchers report that participation in both CBT programs reduce recidivism risk substantially; the research team estimates that there was a "55% reduction in the chances of being reconvicted within 2 years after discharge for R&R and a 52% reduction for ETS" (Friendship et al, 2003, 109). However, further examination of the data by risk level provided support for the use of CBT programs for "medium risk" individuals only; no significant differences were noted for either the high risk or low risk participants of these programs. The authors note that, "For medium risk offenders, the percentage point reduction in recidivism was 14%, and for medium-high risk offenders there was an 11-percentage point reduction" (Friendship et al, 2003, 110). Unfortunately, the researchers point out that even after matching, significant differences still were present between treatment and control groups, which is the reason for the study's level 2 rating in design quality.

While both quasi-experiments report positive results for CBT programs in terms of recidivism reduction, these two studies have design flaws that limit their consideration as evidence for the purposes of this review. At this point, we have one RCT with mixed effects, and two quasi-experiments – of limited quality – that report significant recidivism reduction effects. This research base is insufficient, leading to our classification of the recidivism reduction effects of these programs as ***unknown***.

Four of the quasi-experimental evaluations of CBT programs included in Appendix Table 7B measure in-prison outcomes, with two studies (DiPlacido, et al, 2006; Strah, et al., 2018) examining the impact of CBT on institutional behavior (i.e., infractions, misconduct), and two studies (Gobbett & Sellen, 2014; Mak &Chan, 2018) examining the impact of CBT on in-prison mental health outcomes. The results for the impact of CBT on infractions was mixed: DiPlacido

[10] According to the authors, "This is a 36-session programme that was developed for use within a Canadian offender population (Ross et al., 1988). The treatment targets of the programme are self-control (thinking before acting), inter-personal problem-solving skills, social perspective taking, critical reasoning skills, cognitive style, and understanding the values which govern behaviour (Robinson & Porporino, 2001). Each treatment session lasts 2 hours and focuses on skills acquisition" (Friendship et al., 2003, 106).

[11] ETS is described as follows: "This is a 20-session programme which addresses the same underlying treatment targets as the R&R programme but has adapted the training materials for use in a UK offender population. Each treatment session for ETS is delivered in 2-hour blocks with follow-up work to be completed by participants in between sessions. The sessions include practical tasks, role-play, games, and group discussion to draw out the principles which have been covered during the session. ETS results in around 40 hours of treatment contact time and is recommended for medium-risk groups of offenders" (Friendship et al., 2003, 106).

et al. (2006) reported significantly lower rates of major institutional infractions in the treatment group compared to the control group, there were no differences found for minor infractions. Strah and colleagues (2018) found no differences in infractions between treatment and control groups.

All four studies provide support for the effectiveness of CBT programs. When combined with the findings from the two RCTs, we have sufficient evidence to rate these programs as ***effective***/ evidence-based programs in terms of their in-prison effects on mental health, but not for prison misconduct.

7.5.3 Prison Programs Designed to Improve Emotional Self-Regulation

Appendix Table 7B includes seven studies that examine prison and jail programs designed to improve emotional self-regulation. In this area, we reviewed two randomized control trials, two quasi-experiments, and three studies with non-experimental designs. Only one of these studies included a recidivism measure, but the presentation of the recidivism findings was incomplete[12] and cannot be used to inform our assessment of the program's recidivism reduction effect (Khudayarifard et al., 2010). Based on the available evaluation research, the recidivism reduction and infraction/misconduct reduction effects of programs designed to address emotional self-regulation are rated ***unknown***. However, a review of these evaluations does reveal support for these programs as ***effective***/evidence-based in terms of their impact on the in-prison mental health of program participants.

7.5.4 Prison Programs Designed to Address Criminal Thinking

Appendix Table 7B includes four studies that examine the effects of programs designed to address criminal thinking, including one RCT of a Thinking for a Change (TFAC) program conducted in three Ohio prisons (LaPlante et al., 2021), three quasi-experimental examining the

[12] Only passing mention of recidivism was included in the study (see p.750). Data were only available for a subgroup(n=96) of participants, because the remaining subjects were still in prison at the time of the review. For those released, the researchers reported the following: "No recidivism was observed in the individual and combined treatment groups in any of the prisons in the country, whereas approximately 15% of the participants in the control group returned to prison" (p.750).

TFAC program (Bickle, 2013; Berman, 2005; and Walters, 2017), and one study using a non-experimental design (Folk et al., 2016).

LaPlante et al. (2021) conducted a randomized control trial in three Ohio state prison settings: 2 high security prisons and 1 medium/low security facilities. Rather than test the efficacy of the *Thinking for A Change* (TFAC) program, researchers focused on whether the TFAC model is more effective in a traditional classroom setting than via video conference with co-facilitation by other incarcerated individuals. Effectiveness was measured by comparing pretest and post-test scores on a self-report questionnaire designed to social problem-solving skills. Due to small sample size, the results reported by researchers should be viewed as preliminary. No differences were found between groups at each of the three locations; significant improvements in social problem-solving skills were found for both groups. The research also noted the following: "On average, significant improvements accrue to participants who receive greater program dosage. However, program completion, commonly viewed as a primary marker of satisfactory program performance, is not associated with improvement in social problem solving" (2021, 832). Although the researchers discussed the potential impact of the TFAC program on misconduct, data were not reported on this potential outcome measure.

Prior to LaPlante and colleague's RCT, Bickle (2013) conducted a preliminary assessment of Ohio's TFAC program, using a quasi-experimental design. There were differences between the two groups on several items, including gender, age, and risk level, that represent a significant design limitation. Two scales – the Social Problem-Solving Inventory-Revised and the TCU Criminal Thinking Scales – were administered to a group of TFAC participants (n=748), and a wait-list comparison group (n=956). While there were no differences between the TFAC group and comparisons on the pretest scores for the SPSI-R scale, there were significant differences between groups on pretest scores for five of seven TCI Criminal Thinking subscales. Changes in scale scores were examined pre-post for both groups, controlling for differences between groups. Significant differences in social problem-solving skills and criminal thinking were identified, providing evidence in support of this program[13]. We agree with the researcher that despite research design limitations, "The results of this evaluation indicate that prisoners who complete

[13] See Bickle, G. (2013). *An intermediate outcome evaluation of the evaluation of the thinking for a change program. T*he Ohio Department of Rehabilitation and Correction, Bureau of Research and Evaluation.

the *Thinking for a Change* program experience a significant improvement in the two major foci of the program: social problem-solving skills and criminal thinking errors" (Bickle, 2013, 18).

A second quasi-experiment evaluated the effects of a CBT program – Reasoning and Rehabilitation (R&R) – designed to address criminal thinking among a sample of individuals incarcerated in Sweden's prison system (Berman, 2005). According to the author of the evaluation, "The R&R program is based on social learning theory which posits that offenders have neglected to acquire basic cognitive and social skills necessary for resolving life problems in pro-social ways. The program therefore teaches participants problem solving, social skills including negotiation, managing emotions, creative thinking, value analysis and critical thinking, all according to a detailed manual. Facilitators deliver the program in pairs over a period of three months in 36 two-hour sessions that emphasize active participation" (Berman, 2005, 86). Positive R&R program effects were reported both for in-prison outcomes (pro-social changes in several targeted areas related to criminal thinking), and post-release recidivism. However, the use of a non-equivalent comparison group (and small sample) for the in-prison outcome portion of the evaluation limits our confidence in this phase of the evaluation. In addition, the positive recidivism reduction findings only applied to individuals completing the R&R program; the recidivism rates of program dropout (23% of the 372 participants) were indistinguishable from the comparison group.

We also reviewed a third quasi-experimental study, but it had a very low design quality ranking (see Appendix Table 7B for details). Walters' 2017 quasi-experimental evaluation of a brief cognitive behavioral intervention targeting criminal thinking— a 10-week program called Lifestyle Issues—identified positive changes in various measures of criminal thinking after completion of the program, which resulted in significantly lower levels of disciplinary infractions in the Lifestyle Issues group when compared to a nonequivalent control group. Walters reported that" Prisoners who displayed a drop in GCT scores between pre-test and post-test levels were significantly more likely to show a reduction in prison misconduct, whereas prison misconduct was likely to escalate among those who displayed a rise in criminal thinking scores from pre-test to post-test" (2017, 457). However, this study only provides preliminary evidence of the effects of the intervention on 219 men in a prison in the Northeast, due to the use of a small, nonequivalent control group. We agree with the study author's assessment: "Greater certainty about the relative change between intervention and comparison groups can only be achieved with a more sophisticated quasi-experimental design than was possible in the current study" (Walters, 2017, 465).

Finally, the one non-experimental study we reviewed in this subject area offered additional support for programs designed to address criminal thinking errors. Folk et al. (2016) examined the impact of the *Taking a Chance on Change* (TCC) program, a self-administered cognitive

behavioral intervention targeting criminal thinking, that was evaluated using a sample of 273 individuals in restrictive housing units in six correctional facilities in Maryland. Folk et al. (2016) noted that "The purpose of TCC is to address cognitive and behavioral deficits, as well as challenges common among individuals in long-term restrictive housing such as impulse control, anger, emotion regulation, effective communication, goal-setting, and long-term planning." (275). They reported small to moderate improvements (pre-post comparisons, no control group) in criminal thinking, along with significant decline in disciplinary infractions for a subgroup of 48 individuals who completed the program. According to additional analyses by the research team, "Reductions in reactive criminal thinking predicted reductions in disciplinary infractions" (Folk et al., 2016, 272). Due to the nature of the nonexperimental research design, combined with the fact that outcome data were only collected for 24.4% of the study participants, these preliminary findings—while interesting—do not provide the type of research evidence we need to fully assess this program.

Based on our review of these five evaluations--one RCT, three quasi-experiments, and one non-experimental study--we rate the in-prison impact of programs targeting criminal thinking as ***effective***/evidence-based, while we rate the post-release recidivism reduction effects of these programs as ***unknown***.

7.5.5 Prison Programs Using Mindfulness-based CBT

Appendix Table 7B includes two studies[14] that report the results of mindful-based CBT programs (Umbach et al., 2018; and Maroney et al., 2021). Umbach and colleagues conducted a clustered randomized control trial to answer two research questions: (1) "Does time spent incarcerated result in deficits in emotion recognition, cognitive control, and emotion regulation as measured by an emotional go/no-go task? (2) Does CBT/MT protect against incarceration-related cognitive deficits?" (2017, 370). The target population for this study included youth aged 16-18 incarcerated at the Rikers correctional facility in New York City in 2009 and 2010. Although an adult population (18+) was not included, we briefly summarize the results of the study here because of the limited high-quality research conducted in this area on adult prison populations. The researchers found evidence to support the hypothesis (research question 1) that

[14] Vannoy and Hoyt's 2004 evaluation of a program that incorporated basic cognitive skills and Buddhist psychology principles consistent with mindfulness-based CBT could also be classified in this category, but we have reviewed it under anger management due to the evaluators' focus on improvement in anger control.

incarceration is associated with cognitive decline over a 4-month pre-post period: "We found that incarceration was associated with significant declines in specific aspects of executive functioning" (2018, 46). However, there was little evidence from this study that the mindfulness program reduced cognitive deficits (research question 2). One possible explanation for this "lack of effects" finding was that the control group also received treatment[15]. According to the research team, "With regard to the effects of CBT/MT, institutional constraints dictated an active control group. Thus, it is plausible that a true control group, and one more representative of the lack of actual programming available in this facility (e.g., a waitlist comparison), would have deteriorated even more significantly, providing a clearer measurement of both the effects of incarceration on cognition and the potentially protective effects of CBT/MT. We further acknowledge the limitation that the intervention did not improve cognitive functioning, as has been seen in community samples (Diamond & Lee, 2011), but merely limited the decline" (Umbach et al., 2018, 48).

The second study we reviewed that tested the effects of a mindfulness-based cognitive therapy program in prison was Maroney et al.'s 2021 evaluation of an 8-week mindfulness-based cognitive therapy program conducted in a male prison in the United Kingdom. The authors of the nonexperimental study concluded that this initial program audit offered an initial "proof of concept" and that this program should be offered in the UK prison system. They reported that" At the end of 8 weeks, levels of depression and anxiety were reduced while mindfulness scores had increased, suggesting that mindfulness helped participants cope with difficult feelings and sensations" (2021, 196). Despite these claims, the study cannot be used to assess the effectiveness of the mindfulness-based cognitive behavioral program under review, due to research design limitations.

Based on the limited research currently available, we rate the effects of mindfulness-based CBT programs as ***unknown***.

[15] The authors note the following about the treatment received by control group participants: "The control group consisted of weekly or biweekly group sessions in which participants received portions of two evidence-based interventions: a cognitive-perception intervention focused on attitudes and beliefs about substance use and violence (Sussman, Rohrbach, & Mihalic, 2004) and a sexual-risk reduction intervention (Rotheram-Borus et al., 2003)" (Umacch et al., 2017, 40).

7.5.6 Prison Programs Using a Circle of Strength Program Model

As we noted in our Circle of Strength program description, the target population for this program is *not* the general BOP population: *The program was developed within the BOP. The goal of the program is to offer support and guidance to individuals in short-term placements with cognitions, mental health and/or trauma needs; however, an individual does not have to present with one of these needs to participate in the program.* We did not identify any evaluations of similar, short-term treatment programs with this target population. Our rating for this program's effects is ***unknown***.

7.5.7 Prison Programs Using CBT for Eating Disorders, Insomnia, or Gambling

Program developers looking for evaluation research on the effectiveness of CBT for eating disorders, insomnia, and/or gambling can find several systematic, evidence-based reviews of CBT programs conducted in community or hospital settings.[16] These reviews offer an overall positive review of the effectiveness of CBT-based programs for each of these problems. However, there is very little research on the effectiveness of CBT programs in prison settings. Appendix Table 7B includes only two level 1, non-experimental studies in this topic area: Randall et al.'s 2018 evaluation of a CBT intervention for 30 adult prisoners in a UK prison with insomnia symptoms, and Nixon et al.'s 2006 evaluation of a psycho-educational gambling program conducted among adult prisoners in Alberta, Canada. Both studies reported positive findings. We found no prison-based CBT interventions for eating disorders. Due to the lack of quality evaluation research on the effectiveness of CBT for prisoners with insomnia, gambling problems, and/or eating disorders, we rate these program effects as ***unknown***.

7.6 CBT Programs for Mental and Behavioral Disorders Comparability Assessment

As noted above, the BRAVE Program has been evaluated within the BOP. While the BRAVE Program has remained the same in terms of program staffing, organization, and much of the

[16] For systematic reviews of the research on community-based CBT programs for individuals with eating disorders, see Linardon et al., (2017), and Delaquis et al. (2022); for reviews of CBT for insomnia, see Alimoradi et al. (2022) and Irwin et al. (2006); and for reviews of CBT for problem gambling, see Gooding and Tarrier (2009), and Pfund et al. (2020).

program content, the dosage of the program was reduced by 3 months following completion of the program evaluation (Innes, 2000). Minor changes were also made to the program curriculum, although the CBT focus remained, and the MTC model was more fully integrated into the program as well. For these reasons, we identify the BRAVE Program as comparable to its previous iteration in the BOP, but not identical, i.e., very comparable. The New Zealand programs evaluated by Polaschek et al. (2005) and Polaschek (2011) and the CHANGE Program evaluated by Hogan (2012) appear very similar to the BRAVE and Challenge Programs in terms of their target population, organization, curriculum, and dosage. These similarities support a comparable finding for these evaluations as well.

Regarding the BOP's Anger Management Program, the Trinidad-based anger management program evaluated by Hutchinson et al. (2017) and the anger management program in a low security Midwestern prison evaluated by Vannoy & Hoyt (2004) appear most consistent with the BOP's model of low dosage, nonresidential, CBT-based interactive groups. When we consider the full complement of anger management programs evaluated in other jurisdictions, the BOP's Anger Management Program is only somewhat comparable due to substantive differences in program dosage.

The Start Now Program evaluated by Kersten et al. (2016) is consistent with the BOP's Start Now Program; both programs apply the protocol developed by the University of Connecticut Health Sciences Center. However, the methodological weaknesses of this evaluation did not allow us to draw any conclusions about the program's effectiveness. Therefore, no comparability analysis was warranted for this program.

Program dosage impacts the comparability of the BOP's core CBT programming - the Basic Cognitive Skills, Criminal Thinking, and Emotional Self-Regulation Programs. Based on its limited dosage (i.e., 24 hours of programming), the BOP's Brief Cognitive Skills Program is only somewhat comparable to programs evaluated in other jurisdictions. While many of the same concepts are addressed within the BOP's program, the dosage is less, with external programs offering a substantially higher treatment dose, i.e., 40-100 programming hours. For this reason, we can only classify the BOP's program as somewhat comparable. However, as noted in the program description, the Brief Cognitive Skills Program is designed to serve as a pre-requisite for both the Emotional Self-Regulation Program and the Criminal Thinking Program. If we consider these programs in tandem with one another, as noted below, they are comparable to a larger pool of evaluated programs in other jurisdictions.

As a stand-alone program, the BOP's Emotional Self-Regulation Program is comparable to the Iranian CBT program evaluated by Khodayarifard et al (2010) in terms of its target population, curriculum, and dosage. When paired with the Basic Cognitive Skills Program, the BOP's

Emotional Self-Regulation Program is comparable with the more intensive Growing Prosocial Program as evaluated by Brazão et al. (2015(a), 2015(b), 2018). As a stand-alone program, the BOP's Criminal Thinking Program is comparable to criminal thinking error-based CBT interventions evaluated by several researchers in our review (Gobbett & Sellen, 2014; LaPlant et al., 2021; Walters, 2017). These non-residential programs consist of low dosage, CBT-based interventions aimed at criminal thinking errors. When paired with the Basic Cognitive Skills Program, the BOP's Criminal Thinking Program is also comparable with more intensive CBT-based programs aimed at criminal thinking errors as evaluated by Friendship et al. (2003) and Berman (2005).

Although available research did not allow us to determine program effectiveness, the BOP's Mindfulness Based Cognitive Therapy Program does appear to be quite similar to the programs evaluated by Dafoe & Stermac (2013), Maroney et al. (2021), and Unbach et al. (2017).

Finally, we found very little research related to the BOP's three other programs in this category – CBT for Eating Disorders, CBT for Insomnia, and CBT for Prison Gambling. For the two studies we identified, neither evaluated program was consistent with the BOP's programming in this area with significant differences in dosage and administration of the programs. Consequently, no comparability analysis was conducted.

7.7 CBT Programs for Mental and Behavioral Disorders Recommendations

BOP programs in this chapter address both behavioral and mental disorders. We begin our recommendations with programs targeting behavioral disorders – the BRAVE, Challenge, Criminal Thinking, Anger Management, Start Now, and CBT for Prison Gambling Programs. The BRAVE, Challenge, and Criminal Thinking Programs seek to directly reduce criminality and misconduct, and the Anger Management and CBT for Prison Gambling Programs seek to reduce the likelihood of inappropriate aggression, prohibited acts of gambling (and associated financial motivations to commit crimes) thereby indirectly reducing the likelihood of criminality and misconduct.

Given the promising findings related to the BRAVE Program's effectiveness, the recent decision to expand the program has merit. As a high dosage CBT-based intervention, the program has the potential to address high risk treatment needs more effectively than the significantly lower dosage Criminal Thinking Program (Bourgon & Armstrong, 2005; Makarios et al., 2014; and Sperber et al., 2013). In addition to addressing cognitions, the BRAVE Program appears to be one of a small number of BOP programs targeting antisocial peers absent a co-occurring mental disorder, substance use disorder, or sexual offense. Consequently, the BOP may want to continue to expand the availability of this program, particularly if the ongoing evaluation finds continued

support for the program. In our review, the BOP's BRAVE and Challenge Programs are both rated as promising in terms of intermediate outcomes, offering a significant treatment dosage ideally suited for medium and high risk individuals. The current evaluation of the BRAVE Program, and the upcoming evaluation of the Challenge Program, will further inform the BOP's understanding of the effectiveness of these programs, to include their recidivism reduction potential.

The BOP might benefit from tracking participation in component parts of the BRAVE and Challenge Programs, with the view each module has some degree of value. That is, a basic CBT protocol and criminal thinking protocol are offered in a wide range of programs, and they are also offered as standalone programs. It would be helpful to track participation in these protocols more widely. When an integrated program is completed, the BOP could note completion of relevant individual components. This might be helpful from a treatment planning perspective as well, so new treatment providers could easily note whether an individual is familiar with these core intervention concepts in the BOP.

Lower risk individuals can benefit from less intensive services, but research suggests a substantial treatment dosage is still needed to elicit change. The BOP's Basic Cognitive Skills Program offers a relatively low dose intervention of 24 hours, which may not be sufficient in this regard. As this program is currently under evaluation by Rutgers University, the BOP will gain a better sense of its effectiveness as a standalone intervention.

The Basic Cognitive Skills Program is often paired with one of two other programs in the BOP - the Criminal Thinking and Emotional Self-Regulation Programs. As a stand-alone program, the Criminal Thinking Program is also a small dose intervention, consisting of only 27 hours of treatment; however, the Basic Cognitive Skills Program is considered a prerequisite for the Criminal Thinking Program, and under this model a program dosage of 51 hours is provided. To reach a target dosage of 100 hours, the BOP might augment programming with additional sessions of skills practice. Research by Sperber and Lowenkamp (2017) has noted the addition of skills practice, e.g., role plays, to CBT interventions adds value to programming. In addition, in their 2005 meta-analysis, Landenberg and Lipsey (2005) noted value may be added by increasing the number of sessions per week, which deviates from the BOP's typical approach to nonresidential CBT interventions. One approach to increasing dosage would be to add weekly skills practice sessions to the protocol. At a minimum, the BOP should consider combining the Basic Cognitive Skills and Criminal Thinking Programs into a single, two-phase intervention to ensure a minimum treatment dosage of 50 hours.

In a similar vein, the BOP's Anger Management Program may lack the dosage level required for effectiveness, as suggested in the work of Howells et al. (2005) and Heseltine et al. (2010). As with the Criminal Thinking Program, additional skills practice sessions may enhance program

effectiveness. As the Anger Management Program is currently under evaluation by Texas Christian University, the BOP will soon have a better sense of its effectiveness. If the program's current model is not supported, the addition of skills practice sessions may have merit.

Given the struggles with gambling in prison and its impact on institutional misconduct, the CBT for Prison Gambling Program may be somewhat underutilized. In a 2012 survey of correctional staff and incarcerated individuals, McEvoy & Spirgen noted "When asked if they thought relationships between inmates are harmed by gambling, 66% of inmates and 87% of CO/Staff said "yes." These responses, in part, reflect a realistic understanding of the risks associated with generating debts in a predatory environment and violent confrontations." These findings suggest there is merit in identifying and implementing an appropriate intervention for prison gambling. Surveys of staff may aid in identifying the reasons the program is not widely offered at present. Of course, evaluating this program's effectiveness is a first necessary step to encouraging broader implementation. If the program proves to be effective, the BOP might encourage higher rates of participation by mandating the program when an individual receives an incident report for gambling and/or by offering the individual an opportunity to expunge an incident report for gambling if they successfully complete the program. This program might also be considered as meeting a financial need, if an individual's failure to meet their financial obligations is associated with a gambling problem.

Over the course of the past year, the BOP has significantly expanded the availability of the Start Now Program. At the close of FY 2022, there were 118 individuals participating in the program; today, there are more than 800 individuals participating in the program. One reason for this increase appears to be the BOP's decision to make the program available to men as well as women. While we did not identify significant empirical support for this program, it does merit further review. Designed specifically for a criminal justice population, this program may ultimately prove to be a better approach to applying dialectical behavior therapy principles in a correctional setting. As with other BOP programs, further research is needed. This program is not currently staged for evaluation, but if demand for the program remains high, the BOP should consider an evaluation.

Our consideration of programs in this area has also identified a potential gap in BOP's programming efforts. The BOP does not currently offer a program specifically designed for individuals with a history of interpersonal violence arrests and/or convictions, nor does the BOP identify this issue as a unique treatment need. While the Anger Management, Emotional Self-Regulation, and Start Now Programs have some applicability in this area, interpersonal violence is a complex phenomenon which often involves more than simply an inability to modulate strong emotions. For example, power and control issues are often thought to play a significant role in these behaviors. A recent Office of the Attorney General report noted 42% of federally

incarcerated individuals have a history of violence and a Bureau of Justice Statistics report found domestic violence accounted for 21% of violent crimes (Office of the Attorney General, 2019; Truman & Morgan, 2014). These statistics suggest a sizable portion of the BOP's population may benefit from the addition of an interpersonal violence prevention program to the BOP's FSA-approved programs.

Unfortunately, interventions for perpetrators of intimate partner violence are currently lacking in empirical support. Recent research suggests there may be benefit in addressing the heterogeneity of this population by classifying individuals based on contributing factors and offering differential treatment interventions based on these specific risk factors, e.g., personality disorders, substance abuse (Day et al., 2021; Gover, 2011). Specifically, researchers have suggested integrating empirically supported treatments for co-occurring conditions with intimate partner violence-related psychoeducational content. For example, interventions integrating this psychoeducational content with dialectical behavior therapy and CBT-based substance abuse treatment have been proposed for individuals with borderline personality disorders and substance use disorders respectively (Waltz, 2003; Easton et al., 2008; Gilchrist et al., 2021). The BOP could lead the way in researching, developing, implementing, and evaluating programs to address this important need area.

At present, the Basic Cognitive Skills, Criminal Thinking, and Anger Management Programs are not required offerings at all BOP institutions; however, available needs assessment data suggests more than 50% of the population has an anger/hostility and/or cognitions need. Considering the prevalence of these needs, these programs should be offered at all BOP institutions, particularly if ongoing and planned research supports their effectiveness as treatment interventions. Shifting these programs from "Priority Practices" to required practices at all institutions should be considered to better meet identified needs in the population.

We now transition to recommendations for programs in this chapter addressing mental disorders – the Basic Cognitive Skills, Emotional Self-Regulation, Mindfulness-Based Cognitive Therapy, Circle of Strength, Brief CBT for Suicidal Inmates, CBT for Eating Disorders, and CBT for Insomnia Programs.

The Psychology Services Branch has done as excellent job selecting mental health programs with empirical support outside of corrections, but it is also necessary to ensure these programs are a good fit in a corrections environment. Of note, the BOP is currently evaluating the Brief Cognitive Skills Program and plans to evaluate the Emotional Self-Regulation Program in FY 2026. If these programs prove to be effective, the BOP may want to consider shifting these basic mental health programs from "Priority Practices" to required practices at all institutions.

As suggested with the Basic Cognitive Skills and Criminal Thinking Programs, there may be merit in combining the Basic Cognitive Skills and Emotional Self-Regulation Programs into a single, two-phase intervention to ensure a minimum treatment dosage of 50 hours.

The Circle of Strength Program is designed to provide pre-treatment services for detainees, seeking to reduce the distress associated with recent criminal justice involvement and to encourage future participation in prosocial programming. While a comparable program was not identified in our literature review, this program appears to have a worthwhile objective. The program provides participants with an introduction to 13 relevant topic areas (e.g., anger, depression, substance abuse), as well as information about independent study resources, BOP programs, and community resources in each of these areas. Although not currently scheduled for evaluation, there may be merit in evaluating this program to determine if individuals who complete the program experience reduced incarceration-related distress and/or participate in BOP programming at a higher rate. The program curriculum is well-developed and gender-responsive, targets relevant need domains, and requires only basic group facilitation skills to implement. If the program proves to be effective, the BOP might consider expanding the program to serve newly designated individuals who may be struggling with very similar issues. Of note, this program shares similarities with the Foundation Program, a women's pre-treatment program discussed in Chapter 13 of this report. The Foundation Program is presently being evaluated by the Research Triangle Institute and Urban Institute. The results of this evaluation could in turn inform the BOP's understanding of the potential effectiveness of the Circle of Strength Program.

Several programs for individuals with mental health disorders appear to be underutilized. Most notably, Brief CBT for Individuals with Suicidal Ideation had 11 participants at the close of FY 2023, yet there are certainly more than 11 individuals BOP-wide at risk of suicide at any one point in time (BOP, 2023). A recent PSB report notes 2% of the BOP population presents with "chronic suicide risk" (PSB, 2023). Given this rate, it appears there should be significant demand for this program. In addition, the BOP has provided extensive training on this protocol. Consequently, it is difficult to understand why the protocol is not widely used. Incorporating this protocol into policy might significantly increase its use. The BOP may also want to consider surveying Psychology Services departments to determine why the protocol is not being widely used.

In addition, at the close of FY 2023 there were only 23 participants in the Mindfulness Based Cognitive Therapy Program, 16 participants in the CBT for Insomnia Program, and no participants in the CBT for Eating Disorders Program. If the demand for these programs is in fact this low, the BOP may want to eliminate these programs, freeing up resources for other more in demand programs, particularly given the lack of identified research support for these programs in a correctional setting. At a minimum, there may be benefit in surveying staff to learn more about why these programs are not being offered, particularly if a need for the services exists. For

example, Griffiths & Hina (2022) reviewed correctional literature on sleep disturbances and noted high prevalence rates for insomnia (26.2%) and poor sleep quality (45.9%) in a Chinese prison; poor sleep quality (53.9%-77.1%) in Ethiopian prisons; poor sleep quality (87.7%) in a prison in Iran; and insomnia disorder (61.6%) in an English prison. Therefore, there may be benefit in retaining BOP's "Priority Practice" model to provide staff with a database of specialized resources to consult if a unique treatment need arises, such as an individual presenting with persistent insomnia. When the demand for such services is so low agency-wide, resources might be better directed to other programming areas.

We now offer general recommendations, applicable to both types of CBT programs included in this chapter. Programs for individuals with mental and/or behavioral disorders should be clearly described in policy to ensure staff implement the programs as intended. Incorporating the programs more thoroughly into policy will ensure their availability and allow for their evaluation during the program review process. The PSB has developed very good fidelity measures for these programs, which could easily be incorporated into staff supervision and Program Review Guidelines with additional policy support.

The BOP could benefit from mandating staff training related to CBT interventions. The BOP has a well-crafted web-based CBT training curriculum, which is required training for staff in some program areas, e.g., Residential Drug Abuse Program, Non-Residential Drug Abuse Program. Program fidelity may be enhanced by requiring all practitioners to complete this training prior to delivering CBT programs.

The programs outlined in this section tend not to have clear completion criteria and outcome measures. Incorporating completion criteria and outcome measures into the programs would increase program integrity and suitability for evaluation. For example, requiring a skills demonstration for the BRAVE, Brief Cognitive Skills, Criminal Thinking, and Emotional Self-Regulation Programs has merit, such as requiring completion of an RSA which meets set criteria, presentation of the RSA to the treatment group, and the appropriate acceptance of feedback from the group. Post-program mental health assessments might also be appropriate outcomes measures for the Emotional Self-Regulation Program, such as the GAD-7 and BDI-II. Post-program knowledge tests might also serve as completion criteria in any of these programs, ensuring participants understand key cognitive-behavioral concepts. Intermediate outcome measures associated with disciplinary records, mental health care level changes, and crisis intervention contacts could be collected and analyzed to aid in program outcome evaluations.

7.8 Summary of CBT Programs for Mental and Behavioral Disorders

The table below provides a summary of the results of our research review.

Six of the thirteen CBT programs for mental and behavioral disorders examined in this chapter are currently classified by BOP as EBRR Programs. Based on our review of the evaluation research conducted on these programs published between 2000 and 2022, we find support for classifying three of these programs as EBRR Programs: Basic Cognitive Skills, Criminal Thinking, and Emotional Self-Regulation, particularly when the programs are offered in tandem, i.e., the Basic Cognitive Skills Program paired with Criminal Thinking Program, or the Basic Cognitive Skills Program paired with the Emotional Self-Regulation Program. We found support for the effectiveness of these programs in terms of intermediate, in-prison outcomes, e.g., reduced misconduct, improved institutional adjustment, reduced symptoms. In addition, we found support for *provisionally* classifying the BRAVE, Challenge, and Anger Management Programs as EBRR Programs, based on promising empirical support for their effectiveness in reducing misconduct, improving institutional adjustment, and in the case of anger management reducing symptoms. It is important to note these rankings are not based on evaluations of BOP's own programs; that body of evaluation research simply does not exist. Instead, the rankings are based on our review of evaluations of programs operating in state corrections systems across the United States, and/or in another country's correctional system. While these programs do appear to be comparable to the BOP programs based on our comparability review, it is recommended that each of these BOP programs be independently evaluated. We understand the BOP has plans to evaluate these programs and we support this plan.

We were also asked to assess the remaining seven programs, which are currently classified as PA Programs – the Mindfulness-Based Cognitive Therapy, Circle of Strength, Brief CBT for Suicidal Individuals, CBT for Eating Disorders, CBT for Insomnia, CBT for Prison Gambling, and Start Now Programs. For these programs, our review did not find sufficient research to make any determination about their PA Program designation. Once again, the necessary research with a correctional population has not been conducted.

The Effectiveness of Prison-Based CBT Mental/Behavioral Disorder Programs Summary of Program Rankings					
BOP Program	**Status of BOP Evaluations**	**Evidence Rating: BOP Program Evaluations**	**Evidence Rating: Outside Evaluations - Intermediate Outcomes**	**Evidence Rating: Outside Evaluations - Post-Release Outcomes**	**Comparability Assessment**
BRAVE Program (EBRR)	Ongoing Evaluation Anticipated Completion FY 2026	**Promising for misconduct reduction**	**Promising for misconduct reduction, improved institutional adjustment**	Unknown	Comparable
Challenge Program (EBRR)	Evaluation Planned for FY 2023	Unknown	**Promising for misconduct reduction, improved institutional adjustment**	Unknown	Comparable
Anger Management Program (EBRR)	Ongoing Evaluation Anticipated Completion FY 2024	Unknown	**Promising for misconduct reduction, institutional adjustment, and symptom reduction**	Unknown	Somewhat Comparable
Basic Cognitive Skills Program (EBRR)	Evaluation Planned for FY 2023	Unknown	**Effective for symptom reduction**	Unknown	Somewhat Comparable
Criminal Thinking Program (EBRR)	Ongoing Evaluation Anticipated Completion FY 2028	Unknown	**Effective for misconduct reduction, improved institutional adjustment**	Unknown	Comparable

Emotional Self-Regulation Program (EBRR)	Evaluation Planned for FY 2026	Unknown	**Effective for symptom reduction**	Unknown	Comparable
Mindfulness-Based Cognitive Therapy Program (PA)	No Evaluation Planned	Unknown	Unknown	Unknown	N/A
Circle of Strength Program (PA)	No Evaluation Planned	Unknown	Unknown	Unknown	N/A
Brief CBT for Suicidal Individuals Program (PA)	No Evaluation Planned	Unknown	Unknown	Unknown	N/A
CBT for Eating Disorders Program (PA)	No Evaluation Planned	Unknown	Unknown	Unknown	N/A
CBT for Insomnia Program (PA)	No Evaluation Planned	Unknown	Unknown	Unknown	N/A
CBT for Prison Gambling Program (PA)	No Evaluation Planned	Unknown	Unknown	Unknown	N/A
Start Now Program (PA)	No Evaluation Planned	Unknown	Unknown	Unknown	N/A

APPENDICES

Table 7A: Summary of Meta-Analyses and Systematic Reviews of the Effectiveness of Prison-Based CBT Programs for Mental and Behavioral Disorders

Study (Year)	Program Type	Review Period	Review Criteria	Number of Studies	Key Findings
1) Auty et al. (2017) Systematic Review	A full range of psycho-educational programs for reducing prison violence. Programs included Moral Reconation Therapy (MRT), Anger Management, CHANGE, Strategies for Thinking Productively (STP), Skills Training for Aggression Control (STAC), Alternatives to Violence project, Dialectical Behavior Therapy, Resolve to Stop the Violence Project (RSVP), the Persistent Violent Offender (PVO) program, and therapeutic community (TC).	1996-2016 Note: 15 studies 2000-2016 2 studies of juvenile populations included	Only evaluations of programs designed to reduce violence, with comparison groups, and measures of violence used as outcomes	21 evaluations met review criteria. Note: 5 RCTS and 16 quasi-experiments 17 studies of males, 2 studies of women, 2 studies with both groups	No overall effects across a variety of psycho-educational interventions. For the 5 RCTS: Incidents were lower in the experimental groups, but the difference between groups were not statistically significant. For the 16 quasi-experiments: The results were mixed, with 8 studies reported no differences in outcomes for the treatment and comparison groups, but the remaining studies did find evidence of effectiveness for some of the outcome measures. Setting matters: Of the five studies that were set in a TC, four produced statistically significant reductions in violence in the program group compared to the control group (Dietz, 2003; Lee & Gilligan, 2005; Magliner, 2013; Welsh et al., 2007).
2) Pearson et al. (2002) Meta-Analysis	Cognitive Behavioral Programs Meta-analysis of studies focused on treatment/ intervention programs in	1968-1996 No studies in review period.	All Primary research studies on the effectiveness of behavioral and cognitive-behavioral	69 studies	CBT programs found to have post-release recidivism reduction effects. **"**Results drawn from a total of 69 independent comparisons are in line with previous findings in support of behavioral/social learning/cognitive behavioral treatment (as a general category).

	prison, jail, probation, or parole settings.		treatment in reducing recidivism for offenders were analyzed.		Cognitive-behavioral programs (as a specific category of treatment) can reduce recidivism rates by significant amounts. This was found to be true for the overall collection of cognitive-behavioral studies and also for the sub-categories social skills development training and cognitive skills training." (490) "The authors also add a word of caution and call for more research on cognitive-behavioral programs to provide more specific information needed about the programming and its effects. "The next wave of research should describe the details of the cognitive-behavioral programs provided to the clients, including the specifics of the treatment models and curricula being used, the training and credentials of the treatment staff, how frequent the treatment sessions are, information on supervision procedures to ensure that the quality of the treatment provided is maintained, and the planned and actual time in the program for the clients." (491)
3) Saini (2009) Meta-Analysis	Anger Management A wide range of Anger Management program evaluations	Not identified 12 studies of corrections programs included. Only 4 of the 12 corrections studies were post 2000.	A wide range of institutional and community settings included. Note: "Although one-third of the studies included college or university settings, there was good representation from	96 studies	Anger management appear to reduce anger in program participants, but separate sub-group analyses of the 12 corrections programs was not presented in this review. "Psychological treatments are generally effective in treating anger. The results also suggest a considerable degree of variability in the effect sizes of specific treatments for anger. The results show that at least some of the variability may be explained by the number of treatment sessions offered to participants, the use of manuals to guide delivery of the treatment, the use of fidelity checks, the setting of the research, and whether the study was published or unpublished." (473)

			community treatment programs, correctional facilities, and general hospital settings." (478)		
4) Henwood et al. (2015) Meta-Analysis	CBT informed anger management evaluations Target population: adult males in prison, either screened for anger problems or with violent instant offense	1990-2010 7 were prison studies; 2 were community programs; 4 were conducted in secure rehabilitation centers. 5 prison studies were post-2000	RCT or NRCT with a matched control or a waitlist control, case control and cohort studies. Single case studies and qualitative designs were excluded. All modalities of CBT based treatment for anger or violence receiving treatment in prison or the community. Studies that focused exclusively on domestic violence abusers or offenders with mental health diagnosis were excluded	13 evaluations	Overall positive findings reported with statistically significant reductions in both general and violent recidivism. "The RR analysis found an overall risk reduction in recidivism of 23% for general recidivism and 28% for violent recidivism after treatment. The overall risk reduction for treatment completion as opposed to non-completion was of a 42% reduction in general recidivism and 56% in violent recidivism." (290) "The analyses also indicate that the less intensive anger management seemed to be the most effective treatment modality in reducing offending behavior especially violent offending." (291)

			to limit heterogeneity.		
5) Per et al. (2020) Meta-Analysis	Mindfulness-based interventions in incarcerated populations	1994-2019 Note: 11 of the studies were conducted in adult prisons, post-2000	"Pre–post and control studies were eligible for inclusion in the review if (a) mindfulness-meditation was the primary intervention and (b) the population was in a jail, prison, or an inpatient correctional facility setting." (313)	22 evaluations	Mindfulness based interventions improve mental health in prison, but post-release impact of these programs on recidivism is currently unknown. "The results of this meta-analysis indicate that MBIs may be a potentially promising intervention for incarcerated populations for enhancing emotional health; however, results were inconclusive regarding criminogenic outcomes." (326) **"**Only one study examined recidivism and results were nonsignificant for 3-month post-release (OR = 3.046, 95% CI = [0.618, 14.923], p = .172, ns) and 3 years post-release for arrest frequency (Hedges' g = 0.704, 95% CI = [−0.004, 1.412], p = .051, ns). Results were nonsignificant for individuals arrested in the mindfulness relative to the controlled group (OR = 2.984, 95% CI = [0.681, 13.073], p = .147, ns)." (317)
6) Beaudry et al. (2021) Meta-Analysis and Systematic Review	Psychological Interventions in Prisons Note: interventions included psychological (e.g., CBT or mindfulness-based therapy) or psycho-educational (e.g., vocational, or educational training) programs.	Cochrane Central Registrar of Controlled Trials searched, from inception through Feb.17, 2021	Only RCTS of psychological interventions in jails and prisons that reported post-release recidivism were selected. Pilot studies and cluster randomized trials included	29 RCTS	The results from previous reviews overestimate the impact of prison psychological programs on post-release outcomes (i.e., recidivism). "Publication bias and small-study effects appear to have overestimated the reported modest effects of such interventions, which were no longer present when only larger studies were included in analyses. Findings suggest that therapeutic communities and interventions that ensure continuity of care in community settings should be prioritized for future research. Developing new treatments should focus on addressing modifiable risk factors for reoffending." (759) "If including all 29 RCTs, psychological interventions were associated with reduced

					reoffending outcomes (OR 0·72, 95% CI 0·56–0·92). However, after excluding smaller studies (<50 participants in the intervention group), there was no significant reduction in recidivism (OR 0.87, 95% CI 0·68–1·11). Based on two studies, therapeutic communities were associated with decreased rates of recidivism (OR 0·64, 95% CI 0·46–0·91).” (759)
7) Byrne & Ghráda (2019) Systematic Review	Third Wave Psychotherapies for mental health difficulties and aggression Therapies include Acceptance and Commitment Therapy (ACT), Compassion Focused Therapy (CFT), Metacognitive Therapy (MCT) and Functional Analytic Psychotherapy (FAP)	2013-2018: All available studies up to October 2018. All studies in our review period.	Inclusion criteria: “Intervention studies that used ACT, CFT, MCT or FAP with a forensic population. This population could include adult or juvenile offenders and was not restricted by offence category.” (47) “Studies that focused on mental health difficulties including anxiety, depression, psychosis, personality disorders and	9 evaluations 8 studies for ACT, 1 for CFT and none for MCT or FAP. 5 studies of prison-based programs 2 jail-based programs 1 state hospital setting 1 juvenile corrections center	The research base for these four “third wave” therapies is very limited, leading to the conclusion that the impact of these strategies is unknown. Of the four therapies, we have the most research (8 studies) on Acceptance and Commitment Therapy (ACT). “ACT shows some potential promise as a treatment with a prisoner population, but the general lack of methodologically sound studies greatly limits any conclusions that can be made. At present other treatments such as Cognitive Behavioral Therapy (CBT) and other third wave therapies, most notably, Dialectical Behavior Therapy (DBT) have accrued more evidence as a result of greater amount of research.” (45)

			substance misuse. Interventions that focused on anger, aggression and offence focused work were also included." (48)		
8) Ekanem & Woods (2022) Systematic Review	Non-suicidal Self-Injury Interventions (NSSI) among Incarcerated Women	2000-2019 All studies in our review period.	"…papers were excluded if the terminologies used did not relate to the operational definition of NSSI in this study, did not specify the interventions used, or differentiate between NSSI intervention and suicidal attempt intervention." (224)	11 evaluations 10 studies of women in prison; one of women in high-security hospital	There is insufficient research on the impact of programs designed to address NSSI. "Six interventions for NSSI for incarcerated women were identified as promising in reducing the rate of NSSI. Data did not support the effectiveness of gender-specific interventions for incarcerated women." (220) Interventions under review: Dialectical behavioral therapy: preliminary support in 3 studies Cognitive Behavioral Group Treatment: preliminary support in 2 studies System Training for Emotional Predictability and Problem Solving (STEPPS) : preliminary support from one study Staff Training and Support Programs (STSP): preliminary support in one study Algorithm of care: preliminary support in one study Psychodynamic interpersonal therapy (PIT): preliminary support from one study
9) Ferguson & Wormith (2012)	Moral Reconation Therapy	1998-2010 Note: 25 of 33 studies	Inclusion criteria: experiment or quasi-	33 evaluations, including 5 RCTs, 3 quasi-experiments with matching, 19	Researchers report an overall significant, but modest effect of prison and community based MRT programs on post-release recidivism, as measured by re-arrest**.** Separate analyses for the

Meta-Analysis		were conducted in institutional settings.	experiment, recidivism measured, allowing effect size calculation. Studies included for both adult and juvenile populations, in both institutional and community settings.	quasi-experiments with nonequivalent comparison groups, and 5 studies with no details on comparison group. Note: Recidivism measured using arrest, and longest available follow-up period for each of the included studies.	subgroup of 19 studies conducted in adult prison settings were not provided. However, the researchers do note that the program was more effective in institutional than community settings (adults and juveniles combined). Note: This review has been critiqued in a recent review by Harrell et al. (2022). According to the researchers: "The overall effect size measured by the correlation across 33 studies and 30,259 offenders was significant, indicating that MRT had a small, but important, effect on recidivism. In practice, the treatment effect represents an average recidivism rate of the MRT-treated offenders that was approximately two-thirds the rate of the untreated offenders." (1091)
10) Landenberger & Lipsey (2005); see also **Lipsey & Landenberger (2006);** and **Lipsey et al. (2007)** Meta-Analysis	Cognitive Behavioral Programs Note: The treatment under investigation was a variant of cognitive-behavioral therapy representing or substantially similar to such recognized "brand name" CBT programs as Reasoning and Rehabilitation, Moral Reconation Therapy, Aggression Replacement Training, the Thinking for a Change curriculum, and the Cognitive Interventions Program	1965-2005 17 studies 2000-2004	All studies – using RCT or quasi-experimental designs--conducted during review period on the use of CBT for adults and juveniles in both institutional and community settings.	58 studies	The researchers identified a statistically significant, but modest overall effect of CBT programs on post-release recidivism. The absolute difference between experimental and control groups was .10 (30% experimental vs 40% control). Separate analyses of adult CBT institutional programs were not conducted. Researchers noted: "The mean odds ratio representing the average effect of intervention was 1.53 ($p<.001$), indicating that the odds of success (no recidivism in the post-intervention interval of approximately 12 months) for individuals in the treatment group were more than one and a half times as great as those for individuals in the control group. In relation to the mean recidivism rate for the control groups of about .40, this odds ratio indicates a recidivism reduction of 25% to .30." (7)

	(NIC, 1996).				
11) Thekkumkara et al. (2022) Systematic Review	Psychosocial Interventions	2000-2020 All studies in our review period.	All RCTS, only prison studies, including Pilot RCTs with 10 or more subjects.	21 RCTS	"Overall, the included studies showed significant improvement postintervention (MI, IPT, CBT, positive psychology intervention, music therapy, and ACT) on primary outcome measures such as symptom severity of depression, anxiety, substance abuse, and deliberate self-harm. Positive effects were observed on secondary outcome measures such as motivation, aggression, follow-up rates, and recidivism." (214)
12) Wilson et al. (2005) Meta-Analysis	Cognitive Behavioral Programs Note: 6 moral reconation programs, 7 reasoning and rehabilitation programs, and 1 other CBT	1985-1999 Note: No studies post 2000; only 12 were prison/jail studies.	Only studies with a comparison group included.	20 evaluations	"The evidence summarized in this article supports the claim that cognitive-behavioral treatment techniques are effective at reducing criminal behaviors among convicted offenders. All of the higher quality studies found positive effects favoring the cognitive-behavioral treatment program." (198)
13) Winicov (2019) Systematic Review	Behavioral Health Interventions for suicidal and self-harming individuals Note: "Treatment modalities widely vary across studies and include cognitive behavioral therapy, dialectical behavioral therapy, peer programming, staff intervention training, and uniquely designed courses that incorporate various aspects from	1990-2015 5 studies in adult prison or jail settings, post-2000	Review criteria: Due to the small number of available studies on the topic, the final parameters were: 1) study participants were either prison or jail (i.e. not a maximum security hospital), 2) there were more than 8 participants, 3) the study was	6 evaluations	"This systematic review highlights several areas for improvement within the research on suicide and self-injury in prisons. Research would benefit from more consistent outcome measures and follow-up periods, and studies should clarify the target behavior and make the distinction between suicide, suicide attempts, suicidal self-injury and non-suicidal self-injury." (7) "While Cognitive Behavioral Therapy (CBT) interventions and uniquely tailored intervention programs suggest promising results, the general absence of comparison groups, the shortage of relevant evaluation studies and the inconsistency of behavioral outcome measurements compromise the capacity of this review." (1)

	other treatment modalities." (1)		conducted after 1990, 4) there was support of the intervention effectiveness rather than a summary, and 5) the article was published in a peer-reviewed journal. Studies were not limited by country or by gender or age of the participant.		
14) Yoon et al. (2017) Meta-Analysis and Systematic Review	Psychological Therapies for Individuals with mental health problems in prison settings Note: "Cognitive behavioral therapy, dialectical behavior therapy, Mindfulness-based Therapy, and other group treatments such as Music Therapy and Art Therapy (including self-help treatments) were included. Studies examining only medication were excluded." (784)	1979-2015 31 studies post-2000	RCTs including pilot studies and cluster randomized trials. Note: Both adult and juvenile populations included	37 studies	"CBT and mindfulness-based therapies are modestly effective in prisoners for depression and anxiety outcomes. In prisons with existing psychological therapies, more evidence is required before additional therapies can be recommended." (783)
15) Dafoe & Stermac (2013)	Mindfulness Training	Not Specified	Not Specified	Not Specified	"Mindfulness has been shown to be effective across a number of clinical populations found

Selective Review	A selective review of the research into cognitive-behavioral therapy and relapse prevention in correctional treatment.				within correctional settings. Furthermore, it has been shown to be effective for working with difficulties identified as dynamic, criminogenic needs; for example, self-regulation." (209) "The potential utility of mindfulness-based interventions within the correctional system is increasing as empirical support for mindfulness therapy continues to grow. Furthermore, as the rates of mental health diagnoses within the correctional population continues to grow, the significance of mindfulness-based programs in working with individuals with a wide range of chronic difficulties often seen in correctional populations cannot be ignored." (209) "It is proposed that mindfulness training may exert its influence by reducing experiential avoidance of negative affectivity and distress, an experience common to high-risk situations. Furthermore, as it has been shown to improve self-regulation skills, a common criminogenic need targeted in many CBT/RP treatment programs, it is suggested that mindfulness meditation may play a role in reducing recidivism." (210)

Table 7B: An Overview of Prison-Based CBT Programs for Mental and Behavioral Disorders Evaluation Research (2000-2022)				
Author(s)	**Program Under Review (Jurisdiction)**	**Research Design & Sample Size**	**Quality Ranking: Low (1) – High (5)**	**Key Findings**
1) Brazão et al. (2018)	Study tests the efficacy of the Growing Pro-Social (GPS) Program. It "tested the program's ability to increase, on one hand, cognitive reappraisal (adaptive emotion regulation strategy) and, on the other hand, decrease expressive suppression (maladaptive emotion regulation strategy) over time. It was also assessed if the GPS was capable of reducing disciplinary infractions committed by inmates over time." (57) (9 Prisons in Portugal)	An independent randomized controlled trial with blind assessments, Participants were randomized to the GPS treatment (*n* = 121) or the control group (*n* = 133).	**5 -** A well-designed RCT with sufficient samples. "The GPS's structure follows a progressive strategy of change, which begins by: (a) increasing knowledge about the nature and ambiguities of human communication, (b) changing maladaptive behavioral patterns in specific interpersonal contexts, (c) learning about cognitive distortions and counteracting their influence in the attribution of meaning to events, (d) experiencing and understanding the function and meaning of emotions and their influence on human behavior, and (e) learning about early maladaptive schemas and fighting against their influence on thoughts, emotions and behaviors. This gradual strategy of change requires the program to	Results demonstrated improvements in the treatment group as measured by change over time observed in all outcome measures. "Concerning emotion regulation, and for cognitive reappraisal, while the treatment group showed a significant increase, controls presented a decrease over time. A different tendency was observed for expressive suppression, that is, while the treatment group presented a significant decrease, the control group showed no change over time. These results support the assumption that GPS is capable of promoting emotion regulation, which is one of the program's main goals." (66) "Concerning behavior regulation, results showed that the number of disciplinary infractions and the number of days in punishment significantly decreased over time in the treatment group. In turn, the control group showed no change or a worsening in those same variables over time. These results pointed out the GPS's ability to reduce, not only disciplinary infractions committed by inmates, but also the number of days inmates were in punishment. Therefore, GPS achieved the ultimate goal of any intervention program: changing actual behavior. Further, these outcomes were directly observable and quantifiable, thus not relying on self-report measurement methods." (67)

			be delivered in a predefined sequence of five modules (preceded by an initial session for the presentation of the program): (a) human communication, (b) interpersonal relationships, (d) cognitive distortions, (d) function and meaning of emotions, and (e) early maladaptive schemas GPS ends with a final session, and follow-up sessions can be carried out afterward" (60). "The treatment group attended the GPS program for about 12 months, in addition to the treatment as usual (TAU) delivered at Portuguese prisons: supervision of school frequency, occupational and job-related tasks, sentence planning supervision over time, and counseling by a psychologist in a regular basis (once per week). Participants in the control group received TAU and did not attend the GPS program or any other kind of	

			structured intervention during the research period" (61).	
2) Hogan et al. (2012)	Evaluation of an involuntary cognitive program (CHANGE) for its impact on prison violence and other official misconduct. (Male Prison in a Midwestern U.S. state)	Randomized Control Trial. A total of 213 incarcerated individuals (122 CHANGE, and 91 control group) were included in the study. "Random assignment was based on whether the inmate registration number was odd or even; even numbers went to the CHANGE group and odd numbers were the reserve group. Each group was housed separately, away from each other and general population. Inmates refusing to participate in CHANGE were segregated in a separate block until compliance was obtained." (378-9)	**5 -** Overall, a well-designed RCT. "The inmates in this study were all identified by the prison administration as being eligible for participation in the CHANGE program. Those in the CHANGE program received the involuntary Phase I. The outcome criteria were the number of misconduct reports (in the areas of disobeying a direct order, insolence, violent, nonviolent, and total number of misconduct reports) 3 and 6 months after the end of Phase I. The independent variable was whether the inmate had participated in the CHANGE program or not." (380)	**"**Overall, the results suggest that the CHANGE program had no statistically significant impact on reducing the number of misconduct reports among the inmates who participated in the program as compared to the inmates who did not participate in the program. The CHANGE program participants did, however, show a statistically significant reduction in violent misconducts after 6 months." (382) "Phase I was designed to introduce the inmates to different skill sets needed for changing their current cognitive thinking processes. The length of this phase optimally was 8 weeks, but many of the inmates received all the lessons in a shorter time period. it could be argued that 2 months was not enough time for the material to "sink in" and to be internalized into daily practice. Despite the possible dissipation effect, it may take longer for the inmates to grasp how to apply the material in their prison surroundings." (382)
3) Khodayarifard et al. (2010)	This study investigates individual and group cognitive-behavioral interventions in decreasing psychological symptoms and enhancing the psychological status of incarcerated males.	"Study follows a pretest-posttest experimental design involving a control group. The participants were selected through	**5 -** "The sample, finalized after negotiations with prison officials, included 6% *(N*= 180) of the inmates, allocated in three groups of 60 participants each; one of	"The results of applying the individual and group (combined) cognitive-behavioral intervention showed improvement in the psychological well-being of the prisoners. The intervention succeeded in reducing symptoms (e.g., depression, anxiety, hostility, and paranoia) in the combined therapy group." (751)

	(Iranian Prison)	systematic random sampling from 2,811 male offenders who had to spend at least another 6 months in prison when the study started, and whose minimum level of education was ninth grade. The rationale for using these two criteria was to have enough time for implementing the intervention program and to make sure the participants were able to understand the questions and the program content used in the study" (745-6).	every three participants was assigned randomly to each group. The first group took part, on average, in 8 1-hr weekly individual psychotherapy sessions that used cognitive-behavioral techniques (individual therapy group). The second group took part in 16 2-hr weekly group therapy sessions in subgroups of *15.* The participants in the second group simultaneously attended 8 1-hr individual psychotherapy sessions held once a week (combined therapy group). The third group consisted of inmates who were placed on a waiting list for individual counseling (control group). By the time the interventions concluded, 48 of the participants in the individual therapy group and 46 in the combined therapy group had attended a minimum of 12 sessions of intervention. In the control group, 40 participants took part in the posttest." (746)	"Recidivism rates were analyzed for inmates who were released following intervention (n = 96). The means of release duration for individual, combined, and control groups were 11.8, 12.3, and 12.3 months, respectively. No recidivism was observed in the individual and combined treatment groups in any of the prisons in the country, whereas approximately 15% of the participants in the control group returned to prison." (750)

4) LaPlant et al. (2021)	Study "evaluates whether participation in the Thinking for a Change (TFAC) cognitive behavioral program produces improvement in social problem-solving skills in a prison context" (832). (Ohio Prisons of varying security levels)	Randomized Control Trial. "Of the 112 participants enrolled in the study, 22 were from High-security Facility One (11 traditional, 11 video conference class), 24 in the second (12 traditional, 12 video conference), and 66 were enrolled in the medium/low-security facility (33 traditional, 33 inmate co-facilitated). The sample is approximately evenly split between modified delivery modes and traditional classroom delivery (53.57%). About 20.53% of the sample was enrolled in the video conference class, and 30.83% were enrolled in the inmate co-facilitated class. Participants, on average, attended about 58% of classes (14.48 of 25 total), indicating moderate, but typical, engagement in the course. On average, about 53% of the	**5 -** RCT with pretesting to ensure balanced group assignment. "Upon consenting to participate, each client was pre-tested on a reliable and valid interviewer administered instrument that assesses how an individual approaches day-to-day problems. Some clients, for instance, may think through potential responses and weigh the costs and benefits of different alternatives, whereas others may be more likely to act impulsively. After completion of recruitment and pre-testing, the clients were randomly assigned into a treatment or control (traditional classroom) group within each trial using a stratified randomization procedure to ensure balanced group assignment. Consistent with the initial goal of studying misbehavior post-program but prior to release, the randomization procedure sought to balance groups, such that clients with	"[T]he evidence indicates that video conferencing and inmate co-facilitation produce statistically equivalent results when compared to traditionally run classes. This finding has important implications and suggests that agencies should continue to study and experiment with modified formats of TFAC and CBT more generally, albeit cautiously. As well, the findings are potentially more relevant in the context of a pandemic and the ensuing recovery efforts, which are likely to prioritize social distancing measures and will require program modifications going forward. Supporting the efficacy of the treatment, we find that prosocial changes in problem solving do occur during the TFAC program. However, the evidence suggests those improvements are not conferred by program completion. Rather, improvements appear to accrue with an increase in program dosage. Put differently, the results suggest that some participants benefited significantly from attending several classes irrespective of whether they completed the course, and that some clients completed the course but apparently benefited less." (852)

		sample completed the program." (842, 845)	serious rule violations were not over-represented in the treatment or control group." (852)	
5) Pratt et al. (2015)	Larger-scale evaluation of cognitive behavior suicide prevention (CBSP) therapy to high-risk prisoners to reduce the likelihood of self-inflicted deaths. (Prison in Northwest England)	"A pilot randomized controlled trial of CBSP in addition to treatment as usual (CBSP; n = 31) compared with treatment as usual (TAU; n = 31). The primary outcome was self-injurious behavior occurring within the past 6 months. Secondary outcomes were dimensions of suicidal ideation, psychiatric symptomatology, personality dysfunction and psychological determinants of suicide, including depression and hopelessness" (3441).	**5** - RCT: The study was a single blind (rater) randomized controlled pilot trial. The study sample was recruited from a closed institution with capacity to house approximately 1,200 male prisoners. Inclusion criteria were male prisoners aged over 18 years, who had been identified within HM Prison Service's Assessment, Care in Custody and Teamwork (ACCT) (Ministry of Justice, 2013) system as being at risk of suicidal behavior within the past month. After agreement to be contacted, prisoners expressing an interest in the study were then invited to an initial research interview to confirm eligibility. This process of identifying potential participants was conducted independently of the research team.	"Results indicated that delivering CBSP within a prison setting is feasible, with the majority of patients commencing therapy and choosing to complete the program. The CBSP therapy was found to be associated with improvements on measures relating to the primary outcome of self-injurious behavior (SIB), as well as measures of psychiatric symptomatology, but this did not generalize to other established psychological correlates of suicide." (3447) While the results are based on one pilot study, they may be "seen as sufficiently encouraging to warrant further investigation of the efficacy of the CBSP intervention." (3447)

			Subsequent assessments were completed with a research assistant, independently of trial therapists, at 4 months (post-treatment) and 6 months (follow-up) after the baseline assessment. (3442)	
6) Sacks et al. (2012)	Study comparing incarcerated females with substance use disorders in a prison therapeutic community program with those in a cognitive-behavioral intervention. (258) (Denver, Colorado Prison)	"A prospective, longitudinal, repeated-measures study with randomization was conducted between January 2002 and January 2006. Inmates identified by the Colorado Department of Corrections as needing treatment for substance abuse who consented to participate in the study were assigned to either the experimental group, the Challenge to Change therapeutic community program (n = 235), or the control group, a cognitive behavioral intervention, intensive outpatient program (n = 192). The groups were unequal due to changes in the randomization	**5 -** Well-designed RCT within a secure facility setting. "The Challenge to Change therapeutic community women's program was located in a separate residential building where therapeutic community program activities were provided 4 hours per day 5 days per week during a planned 6-month tenure" (260). "Women in both treatment groups had access to facility-wide services for mental health (i.e., psychiatric assessment, medication, individual counseling), education (i.e., GED and adult basic education classes), health care (i.e., medical and dental treatment), vocational training (i.e., computer skills, carpentry,	The authors state "women in the prison system benefitted from both the therapeutic community treatment program and the cognitive behavioral intervention, with the trajectory of gains differing within specific domains over short- and long-term follow-up. The therapeutic community provided a comprehensive model of substance abuse treatment that integrated gender-specific approaches and practices (e.g., positive coping strategies for distress) that, given the strong evidence of co-occurring mental health and trauma needs of incarcerated women, appears to be more effective than the standard correctional cognitive-behavioral substance abuse treatment at improving reincarceration rates, lengthening time in the community before reincarceration and improving behavioral and emotional outcomes for the women in the 6 months after prison release." (266) "Furthermore, analyses of time to reincarceration, for those women who were reincarcerated, demonstrated that women treated in the therapeutic community were able to remain in the community longer than those in the control group, which translates into cost savings for the correctional system and into a longer period of stability at home in the community." (266)

		procedure from 50/50 to 60/40 for the experimental and control group, respectively, to accommodate differences in the number of treatment slots available in each group. A combined Colorado Department of Corrections and National Development & Research Institutes, Inc., research study steering committee was created to maintain the integrity of the random assignment process" (259).	cosmetology, culinary arts), and community reintegration" (260).	
7) Umbach et al. (2018)	Primary study aim was to test whether incarceration negatively affects aspects of cognitive functioning such as: emotion regulation, cognitive control, and emotion recognition. As a secondary aim was to test protective effects of a cognitive behavioral therapy/ mindfulness training (CBT/MT) intervention. (Rikers Island, New York)	As part of a larger study, 268 sentenced or detained male youths were recruited between August 2009 and December 2010. Youth were invited to participate if they (a) had at least 6 weeks remaining on their sentence or estimated length of stay, (b) could complete an interview in English, and (c) were between the ages of 16 to 18 years. Youth at Rikers	**5** - RCT: Out of the original 268 youths recruited, 197 participants completed both waves of data collection. Of the participants with complete data, 88 participants were enrolled into the control group and 109 participants were enrolled into the experimental CBT/MT group. The groups did not differ in race, percent reporting violent or	Regarding the secondary aim of the study of whether CBT/MT would have protective effects against any cognitive decline, the evidence was weak and while "interaction coefficients for cognitive control and emotion regulation did not reach the traditional significance threshold of $p <$ .05, they are suggestive of the potential of CBT/MT interventions in buffering against some of these effects." (48) Though "these results do not provide enough evidence to unilaterally support protective effects of mindfulness" results do "suggest some degree of buffering against cognitive decline in the CBT/MT group compared with the significant decline in the control group." (49)

		are assigned to one of two buildings depending on their status (sentenced vs. awaiting trial), which consist of multiple dormitories. Dormitories from both buildings and the participants within were assigned randomly to receive either a CBT/MT intervention or an active control intervention (38).	nonviolent crime, number of days in Rikers at base line, or self-reported age of onset of offending.	
8) *Wolf et al. (2015)	Seeking Safety program "A controlled trial of Seeking Safety (SS) and Male-Trauma Recovery Empowerment Model (MTREM) examined implementation and effectiveness of integrated group therapy for comorbid post-traumatic stress disorder (PTSD) and substance use disorder (SUD) on PTSD and mental health symptoms plus self-esteem." (66) (High Security Pennsylvania Prison)	Randomized Control Trial: Participants "were assigned randomly to either random assignment (n = 142) or preference assignment (n = 88) to receive SS or MTREM, with a waitlist group of (n = 93). Manualized interventions were group-administered for 14-weeks. The waitlist design controls for threats to internal validity; the waitlist group includes subjects who were eligible for treatment	**5 -** Overall a well-designed RCT. "There were no significant differences in the age, years incarcerated, and veteran status characteristics between the eligible and declined participation groups, although the eligible group, compared to the decliner group, was more likely to include African Americans (52% vs. 36%, $p < 0.05$) and violent offenders (56% vs. 43%, $p < 0.05$), and less likely to include drug offenders (14% vs. 25%, $p < 0.05$) and without a high school or GED (18% vs. 28%, $p < 0.05$). Those who	As one of the first studies to implement and test a group cognitive–behavioral integrated treatment for PTSD and addiction problems in a male prison population, the feasibility evidence is strong. "Study results modestly support the effectiveness of SS and M-TREM for incarcerated males. In terms of absolute effectiveness (waitlist comparison), participants receiving integrated treatment (SS or M-TREM) showed statistically and clinically significant improvement in PTSD symptom severity over time, although the difference in improvements was not statistically significant compared to the waitlist group (controlling for baseline differences) and the effect size was small. When treatment was disaggregated by intervention type, the effect of M-TREM on PTSD severity was double that found for SS (regression coefficient −8.36 vs. −3.87) and significantly different from the waitlist group. SS was found to outperform no treatment on three outcomes: mental health symptoms, self-esteem, and proactive coping." (78)

		assignment but participated only in study assessments for the 3 months, while the treatment group is assigned to a 3-month intervention (SS or M-TREM). The comparison group trial uses random and preference assignment to SS and M-TREM to test for measurable differences in primary and secondary outcomes post-intervention and at 3- and 6-month follow-up. Intent-to-treat and completer analyses are conducted, as well as analyses that controlled for the nesting of data within individuals and interventions." (72)	declined mentioned several reasons for not participating including not being ready to address trauma issues, not needing treatment, expecting to be released or transferred, or scheduling conflicts with other required programs" (72).	
9) Brazão et al. (2015a)	Pilot randomized trial that assessed the efficacy of a cognitive–behavioral program in reducing cognitive distortions and schemas in incarcerated individuals. Participants were males between 19 and 40 years old. (3 Portuguese Prisons)	Randomized control trial. The initial selection of subjects followed a set of "exclusion criteria: (1) presence of cognitive disabilities (given that this kind of intervention is not suitable for the cognitively-impaired) or psychotic	**4 -** Pilot study with random assignment to treatment and control groups. Relatively small subgroup *n*'s. "A sample of 56 inmates were randomly assigned to treatment and control groups. Treatment subjects attended GPS's 40 sessions for 12 months, while the	"At post-treatment, significant differences were found between groups on the maladaptive cognitive processes and on the majority of the specific core beliefs underlying antisocial behavior, with treatment subjects presenting lower scores than control subjects. When looking at within group comparisons, results suggested that these between group differences after GPS completion may result not only from the improvement achieved by treatment subjects, but also from the deterioration observed in controls in the majority of the studied variables. Results in the subjects that completed

		symptoms (experiential strategies used in GPS are contraindicated for psychotic patients); (2) being treated for drug abuse/dependence (cessation or at least substantial reduction of drug or alcohol use must precede any attempt to attend GPS sessions); (3) being sentenced exclusively for sexual offenses (sex offenders would benefit from more specific intervention programs); and (4) remaining in prison for at least 12 months (GPS's length), since the beginning of the program." (580)	controls did not participate in any kind of program" (580).	GPS may suggest that this program can be effective in buffering this tendency to worsen over time." (583) "Findings offer preliminary evidence of the GPS's efficacy in achieving change at a cognitive level in antisocial individuals, when looking at dysfunctional cognitive processes and/or at underlying core beliefs. If this cognitive malfunctioning can be seen as a correlate of emotional and behavioral regulation problem), then core schemas should be selected as targets for change, and programs should include cognitive change at this level and not only on cognitive distortions." (586)
10) Brazão et al. (2015b)	Study assessed the efficacy of a structured cognitive behavioral group program, Growing Pro-Social (GPS), in reducing anger, paranoia, and external shame in incarcerated males. Participants were all incarcerated individuals between the ages of 19 and 40.	Randomized control trial. NOTE: Sample appears to be the same used in Brazão et al. (2015a).	**4 -** NOTE: Methods same as in Brazão (2015a).	"Post-treatment scores in the studied variables showed significant differences between groups, with treatment subjects presenting a significant reduction in anger-trait (including the temperament and reaction subscales) and paranoia. Differences between groups for anger-state and external shame did not reach statistical significance, but inmates who attended the GPS sessions presented lower scores in these variables at post-treatment, when compared to controls." (230) "These findings raise important questions about the impact of incarceration on inmates' psychological

	(Portuguese Prisons)			correlates of antisocial behavior. The worrisome deterioration observed in controls over a 1-year period in variables such as anger, shame, and paranoia, raises the question of whether traditional prison practices work towards rehabilitation or may be bolstering psychological and emotional processes related to maladaptive behavior." (230)
11) Hutchinson et al. (2017)	Multi-site controlled trial of Anger Management training in Caribbean prisons. It was conducted in 2012–2015 across four correctional facilities. (2) (Trinidad Prisons)	Randomized Control Trial. Participants were recruited from among incarcerated individuals in four prisons in Trinidad: a (male) maximum security prison, male and female general prisons, and a (male) young offenders institution. A total of 85 potential participants were randomly allocated to one of the two conditions (control 26; intervention 59) and completed some or all of the baseline assessments. Of these, 15 completed outcome assessments at Time 1 but not Time 2, 11 were tested at Time 2 but not Time 1, and 2 completed only baseline assessments but not Time 1 or Time 2 outcome measures.	**4 -** RCT design, with variation noted in group sizes and potentially muted effect sizes due to relatively small sample/subgroup sizes.	Results suggest that anger management interventions can be effective at reducing anger assessed on a range of measures. "[A] general reduction of both experience and expression of anger was observed in participants within the intervention group. These participants also reported significant improvements in their anger coping skills by the end of the intervention, and the correlations between improvement in coping and decreases in anger measures suggest that the clinical improvements resulted from a greater ability to manage anger." (10) "Improvements were maintained at 4-month follow-up, but this finding is based on a very small follow-up sample and so provides only weak evidence for a lasting effect of the intervention. The lack of change for individuals in the control group supports the assertion that change was due to participation in the intervention." (10)

		A total of 57 participants (16 control, 41 intervention) provided outcome data at Times 1 and 2, and were included in the analyses. The sample analyzed included a slightly higher proportion of the intervention group (70%) than the control group (62%). The numbers recruited and allocated within each prison (with the numbers included in the analysis in parentheses) were maximum security, 25 (18); men, 23 (14); women, 13 (10); young men, 24 (15).		
12) Pratt et al. (2016)	Preliminary evaluation of cognitive behavior suicide prevention (CBSP) therapy to high-risk prisoners to reduce the likelihood of self-inflicted deaths. Article also considered how CBSP therapy could be modified to suit the demands and requirements of the custodial setting. (Male high-security prison in England)	All participants were identified to be at potential risk of suicidal behavior, and were aged 18 years and over. CBSP therapy was implemented with three male prisoners deemed at risk of suicide. The three cases were selected from a randomized controlled trial.	**4** - RCT: Limited by very small sample size. The delivery of CBSP was modified in line with the specific pragmatic and contextual restrictions and demands of a prison setting. The change methods within CBSP were based on established cognitive behavioral techniques that were modified to specifically	The authors state that, "[a]lthough this is a small and preliminary study, the findings demonstrate that CBSP may offer achievable benefit to prisoners experiencing suicidality. In terms of outcome, no participants had engaged in suicidal behavior in the 6 months prior to follow-up. The rare occurrence of recorded suicidal behavior throughout the course of therapy for each client demonstrated the importance of complementing this observable outcome with a range of assessments from across the suicide continuum. The administration of clinical measures at pre-, post- and follow-up assessments allows for a consideration of the severity of suicidality and

			target the psychological mechanisms underlying suicide behavior. Delivery of the intervention took place over a 4-month period with each participant being offered up to 20 individual sessions lasting 30 to 60 minutes, typically delivered on a once or twice a week basis. (7)	distress experienced by the three case examples compared to the broader prisoner population context." (19)
13) *Sacks et al. (2008)	Challenge to Change Modified Therapeutic Community Program for Women with mental health and substance abuse problems (Colorado Department of Corrections, Denver Women's Correctional Facility (DWCF)) Note: See Program Description for the Challenge to Change modified TC (p. 241-243). "Treatment elements address the issues of trauma and abuse, relationships, education, employment and parenting that are integrated with the woman's substance abuse issues". (242)	Randomized Control Trial (RCT):314 incarcerated females were randomly assigned to one of two treatment groups, a Therapeutic community (experimental group, n=163) or a standard outpatient treatment program (the control group, n=151). Note: "Eligibility criteria required that study subjects have: (1) at least 6 months (and no more than 24 months) remaining until parole eligibility; (2) a CDOC Standardized Offender Assessment (CDOC, 2004) score of 4 or	**4 -** Overall, a well-designed RCT, but Retrieval rate varied across groups. Only preliminary findings from a modified TC. After random assignment, experimental group had a higher % of individuals with high school/GED than controls (67.3 vs. 57.6), but NS. Self-report data on pre-post-program changes in psychological symptoms, trauma, substance use, and criminal behavior, 6-month follow-up.	No overall statistically significant differences on a variety of short-term outcome measures, but the preliminary results do appear to favor the modified TC program. Researchers reported that "Outcomes six months after their release from prison revealed that women in both the E (TC) and C (IOP) conditions improved significantly on all variables in each of the four outcome domains (mental health, substance use, criminal behavior, and HIV-risk), reflecting the effectiveness of both treatment conditions in affecting outcomes positively." (254)

		greater indicative of serious substance abuse problems requiring substance abuse treatment; and (3) a security risk level classification of minimum, minimum-restricted, or medium, to permit participation in treatment." (237) SMI: "The majority of individuals were diagnosed with major depression [65%], with other significant diagnoses of PTSD [43%], manic/ hypomanic [29%], bipolar 1/11 [27%], generalized anxiety [30%] and ADHD [10%].) On average, the research cohort had two Axis I mental disorder diagnoses according to the DIS-IV. The average Beck Depression Total score was 18, which indicates mild to moderate symptoms of depression." (246).		
14) *Sacks et al. (2004)	Personal Reflections: Modified Therapeutic Community (MTC) Program and Mental Health (MH) Treatment in prison.	Randomized Control Trial (RCT): 234 male MICA (mentally ill chemical abuser) incarcerated	**4 -** RCT design with some limitations due to exclusion of crossover cases receiving both MTC and MH services, and	Extent of mental illness in target population: "Data from the Diagnostic Interview Schedule…at baseline revealed diagnoses of a lifetime Axis I mental disorder for 78%, of an antisocial personality disorder for 37%, and of a substance use disorder

	(Colorado Department of Corrections, San Carlos Correctional facility, Pueblo, Colorado)	individuals were randomly assigned to either the MTC group (n=142) or the MH group (n=94); final sample size dropped due to the exclusion of any crossovers, resulting in a sample size of 185 (92 MTC and 93 MH subjects). Outcome measures included six crime variables measured at 12 months post release. Technical violations not included in recidivism measures. Target population: incarcerated individuals with co-occurring disorders serious mental illness and chemical abuse (MICA).	case attrition at aftercare stage. Separate analyses were conducted to examine potential threats to validity.	for 90% of participants. Nearly three-quarters (72%) had used psychotropic medication in their lifetime, while fewer than half (43%) were taking psychotropic medications in the 6-month period prior to incarceration. The Beck Depression Inventory revealed mild to moderate current symptomatology." (489) Recidivism: "Compared with the MH group, the overall MTC group showed significantly lower rates of reincarceration (controlling for age, age of first incarceration, employment in last year, and number of residences in the last year), and the MTC + aftercare group showed significantly better outcomes across a variety of crime measures." (489)
15) Vannoy & Hoyt (2004)	Evaluation of an anger therapy intervention that was developed for incarcerated adult males. The therapy was an extension of cognitive-behavioral approaches, incorporating principles and practices drawn from Buddhist psychology.	Study was an experimental design with a wait-list control group. Inventories were administered to both the treatment and control groups before and after therapy. Two rounds of data	**4 -** RCT with limitation of small sample size. In their discussion of statistical power and effect sizes, the authors indicate the low number of participants contributing to an implied high Type II error rate for the findings.	"The treatment group showed moderate to large improvement relative to the control group for three of the five state and trait anger subscales, including, present feelings of anger**,** present desire to verbalize, and trait reactivity to anger-provoking situations. Effect sizes for the anger scales attempting to measure *how* anger is experienced were all small." (50) In terms of clinical observations, the authors note: "[a]lthough half of the participants were mandated

	(Midwestern state low-security prison)	collection were conducted. Sample: Participants were 31 incarcerated adult males. Ages ranged from 21 to 50. The treatment group (*n* = 16**)** in the analyses reported below includes 10 first-round and 6 second-round participants; the control group (*n* = 15) includes 14 first-round and 1 second-round participants.		to attend anger therapy, and might therefore have been expected to be less motivated group members, by the end of treatment it was usually difficult to distinguish mandated from voluntary participants." (54)
16) *Zlotnick et al. (2009)	Seeking Safety (SS) Therapeutic Community treatment program for women with substance use disorder and PTSD (Rhode Island DOC)	Randomized Control Trial (RCT): 27 women in the TC were compared to 22 women in the treatment as usual (TAU) comparison group. Analyses included 23 of 27 experimental group and all 21 of 22 controls. Seeking Safety (SS) program description: "SS was conducted in group modality for 90 min, typically three times a week for 6 to 8	**4 -** RCT with limitations, such as small sample size and lack of post-program data. Researchers noted the following: "Study limitations include lack of assessment of SS outcomes at end of group treatment; lack of blind assessment; omission of the SS case management component; and possible contamination between the two conditions." (325)	No difference between groups. Researchers noted: "The consistent pattern was that women in both SS and TAU improved significantly from intake to each subsequent time point (12 weeks, 3- and 6-month follow-ups) on each category of measurement (e.g., PTSD, substance use, psychopathology)." (331) "Six months after release from prison, 53% of the women in both conditions reported a remission in PTSD." (325)

		weeks while the women were in prison, with three to five women per group. After release from prison, each woman in SS was offered weekly individual 60-min "booster" sessions for 12 weeks to reinforce material from the group sessions." (328)		
17) Di Placido et al. (2006)	Evaluation of high intensity cognitive–behavioral programs designed to reduce recidivism and institutional misconduct violations of incarcerated individuals, particularly among those who are gang affiliated. The therapy followed risk, need, and responsivity principles. (Federally sentenced individuals in Canada)	Quasi-Experimental Design. "The four matched groups of offenders are untreated gang members (UG; *n* = 40), treated gang members (TG; *n* = 40), untreated nongang members (UNG; *n* = 40), and treated nongang members (TNG; *n* = 40). Participants were selected from a pool of 1,824 male adult federally sentenced offenders (serving sentences ≥ than 2 years) consecutively admitted to the RPC between January 1, 1990 and December 31, 2000. One hundred thirty-three offenders were first identified as	**3 -** "The study is a retrospective-prospective investigation of the efficacy of the treatment of gang members. It can be described as a 2 × 2 design with gang membership (gang and nongang) and treatment (completed and not completed treatment) as the two main conditions. Gang membership and whether or not the participant completed treatment were determined using official records maintained by Correctional Service of Canada. The four groups: untreated gang members, treated gang members, untreated nongang members and treated nongang members were matched on age at	"Overall criminal recidivism was significantly reduced, as assessed by survival analyses, in both treated groups compared to the untreated comparison groups. For those who recidivated, the first violent conviction was less serious (measured by the length of the imposed sentence) in the treated groups compared to the untreated comparison groups. The treated groups also had lower rates of major institutional infractions (but not minor infractions) than the comparison groups." (106) "Treatment of gang members reduced their risk to recidivate compared to untreated gang members. The reduction in violent recidivism using a 2-year follow-up was 20% between the TG and UG groups, and 6% between the TNG and the UNG groups. For nonviolent recidivism, the corresponding reductions were 11 and 17%." (108)

		gang members from the pool." (97)	index conviction, length and type of index conviction, number of prior nonviolent and violent convictions, and race. There are three outcome (dependent) measures: first, all, nonviolent, and violent official criminal code reconvictions following release to the community, and second, the rate of officially documented major and minor institutional infractions after the offender was discharged from the RPC. The third outcome variable is the length of sentence of the first violent conviction after the offender's community release, which, we argue, reflects the seriousness of the reconviction." (97)	
18) Bickle (2013)	Thinking for a Change (TFAC) program (Oregon DOC)	Quasi-experimental design: Researchers noted that "This evaluation uses a quasi-experimental, non-random, two group pre-test post-test design, and it explores intermediate outcomes that examine whether the	**3 -** Quasi-experiment compared TCAF program participants to a wait list control group. Significant attrition in both the treatment and control groups identified, along with differences between groups in age, gender, and risk level.	While there were no differences between the TFAC group and comparisons on the pretest scores for the SPSI-R scale, there were significant differences between groups on pretest scores for five of seven TCI Criminal Thinking subscales. Changes in scale scores were examined pre-post for both groups, controlling for differences between groups. Significant differences in social problem-solving skills and criminal thinking were identified, providing evidence in support of this program.

		program has influenced participant's self-assessment of their social problem-solving skills and approaches and their acceptance of criminal attitudes." (i)		Despite research design limitations, "The results of this evaluation indicate that prisoners who complete the *Thinking for a Change* program experience a significant improvement in the two major foci of the program: social problem-solving skills and criminal thinking errors." (18)
19) Gobbett & Sellen (2014)	Study evaluates a new cognitive-behavioral group intervention in UK prisons: the Thinking Skills Program (TSP) that aimed to develop participant's general cognitive skills. This study reports on the effectiveness of TSP using psychometric assessments and compares outcomes to an earlier CBT program that was being phased out. (Male Prison in Wales)	Quasi- Experimental Design. Participants in this study were 40 adult males all of whom were residing at a Category B prison in Wales. Participants were selected on the basis of their attendance at TSP. This study was conducted at a time when TSP was first being implement as a replacement for a prior CBT program. Results from this initial group were compared to previous results of incarcerated individuals who had completed the older program. "As part of the attendance in TSP, participants were required to complete	**3 -** No random assignment, and a small initial sample of TSP program participants to compare to subjects who had completed the CBT program being phased out. "As part of their participation, subjects were asked to provide consent for the psychometric assessments they complete to be used for research purposes. Participants of this investigation were selected for, and attended, therapeutic sessions with no knowledge that they were to be included in this specific study. Participants completed the pre-program psychometric assessments within 3 days prior to the first	**"**It was hypothesized that participants of the TSP would show post-program improvements in their thinking styles and attitudes, as measured by the psychometric assessments administered. Analysis of pre- and post-program results indicated that on 14 of the 15 psychometric scales, TSP participants showed expected improvements in their scores following treatment, in areas such as Impulsivity, General Attitude to Offending, Entitlement, Power Orientation, and Cognitive Indolence." (468) "The results indicate a positive impact of TSP on the thinking styles and attitudes of those offenders who participated. In addition, if attention is paid to effect size analysis, TSP appears to have a positive impact on a greater range of factors associated with criminal thinking styles and attitudes than earlier interventions. The results of this investigation would suggest that among other things, TSP may assist offenders in addressing thinking styles associated with criminal behavior and help develop more prosocial patterns of thinking." (468)

		a battery of psychometric assessments prior to the commencement of the program and at the end of the program. Four psychometric assessments that were included in the newly implemented TSP psychometric assessment battery had previously been included in the ETS assessment battery." (461)	program session and the post-program psychometrics within 3 days of the final session of the program." (463)	
20) Innes (2000)	Evaluation of the first two years of the Bureau of Prisons' Beckley Responsibility and Values Enhancement (BRAVE) Program replicated and extended previous results showing that the program has had a substantial impact on institutional behavior. (This evaluation was conducted at one BOP facility, FCI Beckley)	Quasi experimental design. The study followed 2,935 incarcerated males, 289 of whom were program participants, admitted to BOP custody during the same period of time and matching the criteria used to designate individuals to the BRAVE program at FCI Beckley participated during the first two years of its operation, during calendar years 1998 and 1999. All cases were tracked for the	**3 -** Comparison group for this evaluation were individuals admitted to the facility during the same time period who did not participate in the BRAVE program. Matching of participants in treatment and comparison groups was not done. Results from this study were compared to a smaller scale assessment with a shorter follow up period of the first cohorts to complete the BRAVE program. Findings were essentially identical.	"BRAVE Program participants had an annualized rate of misconduct which is 24.2 percent lower than the comparison group while program graduates had a rate that was 53.1 percent lower." (1) "During their first 18 months of incarceration, 49.3 percent participants were admitted to a SHU while 65.0 percent of comparison inmates were and that among program graduates, 42.6 percent were admitted to a SHU during the same time period." (1) "Program participants spent 30.0 percent fewer days in a SHU with an average of 20.5 days during their first 18 months of incarceration versus 29.3 days for the comparison group. Program graduates spent an average 10.8 days in a SHU, 63.1 percent fewer days than the comparison group." (1)

		first 18 months of their custody, allowing the participants to be followed for nine months after the program.		
21) Mak & Chan (2018)	Study assesses the impact of both cognitive-behavioral therapy (CBT) and positive psychology intervention (PPI) versus treatment as usual (TAU) on incarcerated females with psychological distress. (Female institution in Hong Kong)	Quasi Experimental design. "40 female offenders with moderate to high levels of psychological distress were recruited into our study. They had no *specific* treatments other than CBT or PPI. Another 35 female offenders on the waiting list were recruited as comparison women. Given the limited capacity of the facility, it was not feasible to accommodate both treatment participants and comparison participants on the same unit, so the comparison women continued to reside elsewhere in the prison. All women otherwise received TAU, which included	**3 -** "At the outset of the intervention, the treatment participants were randomly assigned to one of two groups. In one, the women first received eight sessions of CBT, followed by eight sessions of PPI, and in the other they first received eight sessions of PPI, followed by eight sessions of CBT. A battery of self-report measures was distributed to the participants before session 1 (Time 1), after session 8 (Time 2) and after session 16 (Time 3). Comparison between the two groups at each Time point allowed evaluation of effectiveness of the interventions compared with TAU. Comparison between measures at Time 1 and Time 2 in the treatment group only allowed evaluation of the	"Findings show a clear advantage for psychological interventions with women in prison over TAU, providing minimal support. Differences between eight sessions of CBT and eight sessions of PPI were small, but CBT appeared not only to alleviate distress but also build strengths while PPI appeared not only to enhance psychological well-being but also to reduce psychological distress significantly. A longer course of treatment in which women received both forms of intervention had advantages over either separately." (167-8)

		officers and clinical psychologists providing supportive counselling to them 2–4 times per month, according to usual practice when women are on the PSY GYM waiting list. None of the comparison women received any CBT or PPI." (161)	relative effectiveness of CBT and PPI. Comparison between Time 2 and Time 3 in the treatment group allowed us to test for a cumulative effect of the interventions." (165)	
22) *Pardini et al. (2014)	Cognitive Bibliography for the treatment of depression in jails and prisons (Two sites: Tuscaloosa, Alabama jail; and an unnamed maximum-security prison in Alabama)	Two separate Randomized Control Trials (RCTs): "Participants in both samples were randomly assigned to either a treatment group that received the 4-week bibliotherapy program or a delayed-treatment control group" (p. 141). Sample size for Jail RCT: 17 in treatment group and 20 in delayed treatment control group. Sample size for prison RCT: 19 in treatment group and 23 in delayed treatment control group.	**3 -** Two Small sample RCTs with short follow-up pre-post comparisons focusing on improvement in mental health (depression symptoms and overall psychological symptoms) only; they do not include substance use or recidivism measures.	Jail RCT findings: Pre-post differences in the depression index noted, with positive effects noted for most participants. Prison RCT findings: Pre-post differences in two depression measures noted. Researchers found that "participants in the treatment group experienced a significant decline in depression scores when compared with the control group on both measures of depression." (148) Note: "The primary hypothesis of this study is that cognitive bibliotherapy will be effective in the treatment of depressive symptoms as evidenced by significantly lower posttreatment scores on the BDI for the treatment condition when compared with the delayed-treatment control group. The secondary hypotheses are that statistically significant reductions in hopelessness and dysfunctional attitudes, as measured by the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978), will occur in the treatment condition relative to the control condition. Overall psychological symptoms, as measured by the Symptoms Check-List-90-Revised (SCL-90 –R; Derogatis, Rickels, & Rock,

				1976) will be significantly reduced in the treatment condition as compared with control." (143)
23) Polaschek (2011)	Evaluation of an intensive cognitive-behavioral rehabilitation program for violent men. (New Zealand's Rimutaka Violence Prevention Unit (RPVU).)	Matched comparison group design. 112 medium- and high-risk prisoners who entered the program after 1998 are case matched to 112 untreated men. "For each prisoner in the treatment sample, a matched comparison man was selected from a national computer database of 5,000 men who had served a prison sentence of at least 2 years for a violent offense." (669)	**3 -** Because specific criteria were used to produce matches for each treatment group participant, "as expected, statistical comparisons of the two groups on the matching variables and a range of other conviction history variables found no significant differences." (669)	Polaschek states, "the results presented here provide some evidence that the program had a positive effect on reconviction risk: fewer high-risk program completers were reconvicted for any offense, or for a violent offense during an average of 3.5 years of post-release follow-up. Completers' first re-offense of any kind occurred significantly more slowly than for the matched untreated comparison men, and the survival curve for violent reoffending showed a similar pattern. Furthermore, these positive results for high-risk program completers were not offset by the recidivism outcomes of noncompleters. Intent-to-treat analyses—where these men who received only a partial dose of the treatment are treated statistically as if they attended all of the program—also show overall positive results." (674) "Non-completers were slightly higher-risk cases at the outset. Static risk estimates—which are not affected by program attendance or offenders' efforts to rehabilitate themselves—show that compared to those who completed the program, non-completers were estimated to be 4% more likely to reoffend seriously at the time they entered the program. However, there is no evidence in their actual outcomes that removal from the program—whether voluntary or enforced—further increased their risk. Non-completers' rates of recidivism were similar to those of their matched untreated comparisons." (674)
24) Polaschek et al. (2005)	Evaluation of an intensive and cognitive behavioral prison program for high-risk violent men. Preliminary	Quasi-experimental design. The treatment group comprised the first 22 incarcerated	**3 -** Because the comparison group was not directly matched to the treatment group, a	"A significantly smaller proportion of those men who successfully completed the program were subsequently reconvicted of a violent offense. Most treated men with new violent convictions failed in

	outcome data are presented for three indices during 2 or more years of follow-up: nonviolent reconviction, violent reconviction, and subsequent imprisonment. (1611) (New Zealand Prison)	individuals who completed the violence prevention program (VPP). They had been released into the community for at least 2 years prior to the extraction of recidivism data. The comparison group was first selected for an evaluation of a community based violent offender program. Using a case-to-case matching process, 60 comparison group members were selected from the national database of all violent convictions in 1990 (3,649 cases) and compared them with 60 men who had attended the VPP. (1617)	comparative analysis of relevant demographic variables was undertaken to establish how equivalent the groups were. Significant differences were found in the ethnic composition of the two samples, but offense history variables revealed no statistically significant differences between the control and treatment groups. These findings support the view that the comparison and treatment groups were sufficiently similar for valid comparisons to be made". (1618)	the first-year post release. However, their time to reconviction was more than twice as long as for comparison violent recidivists." (1623) "Comparisons between nonviolent reconvictions were not as encouraging. More than half of both groups were detected and subsequently convicted for nonviolent reoffending within a few months of release, and overall, three quarters of the treated offenders and most of the comparison group obtained such convictions during follow-up. Treated offenders appeared, if anything, to reoffend a little more rapidly than untreated." (1623)
25) Spiropoulos et al. (2005)	"The effects of Problem Solving (Taymans & Parese, 1998) are compared across small diversion and prison samples for men and women. A second program, Pathfinders (Hansen, 1993), was compared to the Problem Solving program among incarcerated women	The quasi-experimental design of the study "allowed for the comparison of treatment effects for men and women in both community (diversion) and prison settings." (76)	**3 -** Experimental groups with comparison groups lacking random assignment. For some of the contexts (e.g., men's prison), sample sizes were smaller than optimal, therefore "results are not as definitive as they might	"The *Problem Solving* program did not impact interpersonal conflicts and problems related to work assignments, the program significantly reduced reported misconducts for men and women in diversion and women in prison settings. *Problem Solving* participants also achieved significantly lower depression scores relative to comparison group members in the two diversion settings and in the men's prison. In the women's prison group, *Pathfinders* significantly reduced depression scores

	offenders to determine whether its focus upon empowerment and relationships enhanced the effects of the more generic program." (69) (A southeastern U.S. state)	661 total subjects participated in the study across 4 contexts. Each context had at least one experimental group and a comparison group.	have been with larger samples." (89)	over a longer, sustained, period of time, whereas the *Problem Solving* program had no impact." (87-8)
26) Strah et al. (2018)	Study uses propensity score matching (PSM) to evaluate the effectiveness of a CBT-based substance abuse program in reducing misconduct. (22) Disciplinary outcomes for males were compared between program graduates (n=156) and non-graduates (n=482). (22) (Northeastern state correctional facility)	Matched comparison group design. "This evaluation employs PSM for controlling for differences between treatment groups to reduce model inefficiency and bias." (27)	**3 -** "Demographic and institutional variables associated with misconduct were used as control variables in matching. Matched covariates were age, race, cohort group, sentence length, offense type, number of prior convictions, and initial classification scores." (30)	Analyses "did not support the hypothesis that CBT program completion will reduce the likelihood of inmates incurring disciplinary reports. Findings indicated that inmates who completed programming experienced no significant change in accrual of disciplinary reports compared to the control group. This outcome runs counter to most previous research, which posits that inmate misconduct may be significantly reduced as a treatment effect of CBT interventions." (35-6)
27) Berman (2005)	Reasoning and Rehabilitation Program (Sweden Prisons)	Quasi-experimental design used to compare 372 male R&R program participants to two separate control groups. Control group 1 was comprised of 44 voluntary control group participants in prisons similar to the prisons administering the R&R program.	**2 -** Researchers used control group 1 for the assessment of in-prison changes; they then used control group 2 for the post-release recidivism analyses. While sample size was small and matching procedures for control group 1 were problematic, better	Researcher reported that the R&R program had positive short-term, in-prison outcomes, as well as longer term, post-release outcomes, using 3-year post-release reconviction as the recidivism measure. However, the short-term findings were based on comparisons to a non-equivalent control group with a small n of cases. The recidivism findings were based on a larger, better matched control group; here findings varied for program completers vs program dropouts, with significant findings only found for completers.

		Control group 2 (n=570) was created by matching controls to either program completers(n=430) or dropouts (n=140) from a large pool of sentenced individuals (n=1103). Matching criteria included age, crime type, sentence, and criminal history.	matching procedures were used for Control groups 2. 286 of 372 participants completed the program. R&R program had a 23% dropout rate; data were missing for about half the dropouts. Baseline test data were available for 98% of program completers.	Researcher noted the following:" This study found that Swedish male prison inmates who completed the R&R program showed short-term pro-social changes in sense of coherence, impulsiveness, venturesomeness, and attitudes towards the law, courts and police as well as tolerance for crime and criminal identification. In addition, pro- gram completers showed a 25% lower risk of reconviction over a three-year period following prison release, compared to controls matched to both completers and dropouts. On the other hand, program dropouts, younger and more criminally active, showed a 38% higher risk of reconviction compared to control." (98)
28) Friendship et al. (2003)	Study examines he effectiveness of prison-based cognitive-behavioral treatment program by using reconviction as the outcome measure. Research included adult males who had been in the community for at least 2 years following their discharge from prison for a custodial sentence of 2 years or more. (UK Prison System)	Retrospective quasi-experimental design. "The treatment group consisted of offenders who had voluntarily participated in a cognitive skills program between 1994 and 1996 (*N*= 667). The treatment group also included offenders who had commenced the program but did not complete the program, i.e., treatment dropouts. Sixty-six offenders, or 10% of the sample, had dropped out of treatment. The reasons for dropout were as follows:	**2 -** Matched comparison group design with validity issues. "[Comparison group subjects] were matched to the treatment group (using a systematic approach described below) on a number of variables that have consistently been identified as predictors of reconviction in the criminological literature in the UK. The matching variables were: current offence, sentence length, age at discharge, year of discharge, number of previous sentencing occasions and probability of reconviction score." (105)	There was a significant difference in the predicted direction between the treatment and comparison group reconviction rates for medium–low and medium–high-risk individuals. Treatment group participants had significantly lower rates of reconviction 2 years post-release. For the low- and high-risk individuals there was a trend in the expected direction, although the difference was not statistically significant. The authors note a possible confound for the results: "Despite the study adopting a systematic matching process, significant differences emerged between the treatment and comparison groups on the matching variables. This highlights a fundamental difficulty when working with non-randomized experimental designs, i.e., ensuring comparability between treatment and comparison group samples." (111)

		offender terminates treatment; treatment terminated by staff; offender transferred to another prison; offender released from prison; and other reasons which included injury or illness. The comparison group consisted of offenders who had not participated in a treatment program (*N*=1,801). Offenders were retrospectively identified using Prison Service records." (105)	Even with this matching procedure, key differences were present between the two groups.	
29) Saffi & Lotufo Neto (2013)	Assessment of a penitentiary relapse prevention program. Participants were incarcerated males who had maximum sentences of less than 15 years and had already served enough time to be eligible for an alternate sanctioning hearing (e.g., reduction in facility security level, halfway house) and/or parole. (377) (Brazilian Prison)	28 incarcerated individuals (15 experimental group, 13 comparison group) participated for the entire duration of the study.	**2 -** Experimental and comparison group with limitation of small sample size. The study was initially planned with a sample of 200 subjects which was deemed as ideal. The 200 subjects would have been divided into a control group and experimental group using a table of random numbers. A number of situational factors prohibited the planned design and necessitated the study be conducted	Analyses indicate "that the Penitentiary Relapse Prevention Program reduces fear of negative evaluations. The reduction in the Fear of Negative Evaluation Scale scores can be associated with improved self-esteem, as the participants felt safer and more confident. Valliant and Antonowics (1991) mention an increase in self-esteem and a decrease in anxiety in inmates who undergo Cognitive Therapy in weekly two-hour sessions." (380) The control group showed modest improvements "despite not having participated in the Penitentiary Relapse Prevention Program. This might be because prison is a very hostile environment and the study gave participants the opportunity to be heard (in the interviews, before and after the program) and to tell their stories to people who were interested in

			with a much smaller number of participants.	them. This attitude alone can be considered as an intervention that relieves symptoms." (380) "There was no significant difference in the penitentiary relapse rate between inmates that participated in the program and those who did not participate (control group)." (380)
30) Gilligan & Lee (2005)	Resolve to Stop the Violence Project (RSVP) Program includes 3 components: accountability, victim restoration, and community involvement. Individuals can be mandated to the program. The residential program is 12 hours/day, 6 days/week with workshops, academic classes, theatrical enactments, counseling sessions, and communications with victims of crimes. Program duration varies. (San Francisco Jail)	Retrospective review of 1 year of court/ criminal records for 101 individuals who spent 8 weeks or more in the RSVP compared to 101 individuals who were eligible to participate in the program but unable to do so due to lengthy waiting lists. Assignment to the program was not random. Note: Individuals who were transferred directly from jail to prison were excluded from the study, as an evaluation of recidivism reduction was the focus.	**2 -** Limitations of the study include the lack randomization, lack of matched controls, and small sample size. NOTE: Demographic factors were analyzed via independent *t*-tests and χ^2 test to confirm comparability of the two groups. To assess lengths of stay effects, *t*-tests were used to compare individuals in the program for 8 weeks, 12 weeks, and 16 weeks or more.	Overall, mixed findings reported for the recidivism analyses, with no effects for overall re-arrest rates, but significant differences between treatment and control groups for violent re-arrests. Individuals who participated in RSVP had lower rearrest rates for violent crimes (-46.3%, $p<0.05$*)* and spent less time in custody (-42.6T, $p<0.05$). The decline in violent re-arrests increased with greater lengths of stay (-53.1%, $p<0.05$ for 12 weeks or more; -82.6%, $p<0.05$ for 16 weeks or more. However, weaker statistical strength was noted as sample sizes dropped as program duration increased, i.e., 8 week $n=101$, 12 week $n=71$, 16 week $n=61$. All subjects experienced a lower level of recidivism after incarceration. Reductions in violent recidivism for RSVP participants were significantly greater – a reduction of 66.7% v. 41% in the comparison group. However, overall re-arrest rates were not significantly different between the two groups.
31) Adamson et al. (2015)	Study evaluates an Improving Access of Psychological Therapies program (IAPT) to people in prison that is thought to offer a valuable	Study adopts an observational, prospective cohort design. "Patients were categorized into	**1 -** The total sample (n = 627) self-selected into one of the four groups described based on their progress in the program	"Findings suggest that employing brief evidence-based psychological therapies for anxiety and depression within a stepped-care framework may be associated with large clinical effect sizes within a

	opportunity to address mental health problems and improve continuity of care from prison to the community. (Participant were adult males housed at HMS Lincoln, a Category B prison in the UK holding remand/convicted prisoners.)	three major groups; those referred but not assessed, those receiving an assessment contact only and those who entered treatment as defined by two or more clinical contacts with an IAPT practitioner (minimum of one assessment and one treatment session). Using pre-selected values on the electronic patient management system used by the NHS service provider, the IAPT team recorded the final status of the treated group into those that completed treatment, those who dropped out of treatment, non-completers who were moved to another prison establishment, non-completers who were released into the community and those who were found to be unsuitable during treatment and moved/signposted to a more appropriate	and/or their status within the correctional system. "This evaluation reports the outcomes of routine practice within the Lincolnshire IAPT service and therefore suffers from the lack of a control group. It is possible that some of the observed clinical improvements are due to factors other than psychological intervention such as spontaneous remission or engagement in prison programs and activities." (198)	remand prison with clinical outcomes comparable to findings from community IAPT services." (194. "Clinical recovery was achieved in 55% of cases of depression and 52% of cases of anxiety. This is in line with the findings at the community IAPT demonstration sites where recovery was reached in 55% and 56% of cases, respectively." (196)

		service to meet their needs." (190-1)		
32) Blacker et al. (2008)	"An active drama-based approach combined with cognitive-behavioral techniques was used to explore issues such as masculinity, power and control, pride and shame and victim awareness. Reductions in anger were hypothesized." (129) (Study involved adult males housed in six prisons in the UK.)	Open trial design, pre-post- comparison with no control/ comparison group. 62 subjects convicted of violent offenses were assessed using the State-Trait Anger Expression Inventory-2 (STAXI-2) to assess whether anger was reduced after participation in the drama-based program. Note: criminal histories of participants were not made available to research team.	**1 -** The program was nine days long, consisting of three three-day blocks over consecutive weeks, with two sessions per day. The average session lasted two and a half hours. Each nine-day course was facilitated by two members of the Geese Theatre Company. Participants progressed from working at one step removed, i.e., focusing on fictional characters and situations, to working directly with their own behavior.	"The results of this single group pre/post design study show that the drama-based intervention aimed at enhancing anger management with offenders with a history of violence was associated with significant improvements on all scales of the STAXI-2. These results indicate the potential usefulness of a drama-based approach for work with violent offenders." (134) "Despite positive changes, methodological limitations need to be taken into consideration. The single group pre/post design makes it difficult to determine whether the results are attributable to the drama intervention or to other factors, such as external events or other interventions conducted within the prison at the same time. Therefore, interpretation of the results needs to be made with caution." (135)
33) Brown & Brown (2015)	Study is an evaluation of a short-term, pastoral counselling group that was held as an adjunct to daily secular individual and group counselling and rehabilitation at a high security prison. Pastoral counselling employed spiritual and psychosocial methodologies to reduce anger, improve prisoner frustration tolerance, and develop a sense of self-efficacy and	Open trial design. A 10-session weekly pastoral counselling group was offered to the 100–120 prisoners who partook in daily full-time religious study. "The group was an adjunct both to religious study and to ongoing social work prison rehabilitation programs. The latter tended to be secular,	**1 -** Open participation in the treatment group with no control/comparison group. "Therapy addressed personal, interpersonal, group, and transpersonal levels. Fundamental to all of these levels was the notion that prisoners inevitably become adapted to maladapted cultures. These range from criminal sub-	Research is hampered by a lack of measurable results. Conclusions were gleaned from the treatment process. "[T]he effectiveness of this group can only be surmised by group adherence, by feedback between groups and by the request for continuation of the group by both prisoners and their rabbi. [T]he group appeared not only to reduce anxiety, depression and anger, but also increased the members' sense of self-efficacy and of an internal locus of control. This bolstered a 'can do' rather than a victim self-concept." (44)

	communal identity. It combined semi-didactic scriptural input with Pierre Janet's personality model, Fritz Perls' gestalt therapy, and analysis of the group process. (40) (Study took place in Israel with Jewish participants favorably oriented toward religion.)	psycho-educational, and aimed at reduction of unwanted behaviors, treatment program adherence and compliance, and social rehabilitation, especially of those with concomitant substance abuse." (40)	cultures in open society, to prison culture and its subcultures." (42) "The first part of each session was devoted to a group warm-up, to modelling therapeutic methods, and to psycho-spiritual education. The second and greater part was principally devoted to one-to-one, gestalt therapy counselling in the group in tandem with group feedback, discussion, and interpretation of group process." (42)	NOTE: Authors of the study also conducted the group counseling sessions, thus were essentially self-evaluating.
34) Folk et al. (2016)	Study tested the effectiveness of a self-administered, cognitive–behavioral intervention targeting criminal thinking for individuals in segregated housing: Taking a Chance on Change (TCC). (Maryland DOC)	Open trial design. The sample consisted of 273 individuals in segregated housing. Participation in TCC was voluntary. All individuals who will be spending more than 90 days in segregated housing are made aware of the TCC program upon admission to segregated housing. Individuals who were determined to have	**1 -** The "study utilized a pre-post design without a control group, allowing for several threats to validity. First, participants were not randomly selected from a pool of possible participants (i.e., selection effects). Although some exclusion criteria existed, participants were largely self-selected, likely resulting in self-motivated inmates. Second, the experience of restrictive housing may	Pre and post intervention data on criminal thinking were available for 72.2% of the study sample; improvements in criminal thinking were identified for general, proactive, and reactive criminal thinking. Due to limited outcome data, the impact of the TCC program on disciplinary infractions could only be assessed for the first 48 individuals in the restrictive housing units that completed the program, represented only 24.4% of program participants. For this subgroup, disciplinary infractions declined significantly, and separate analyses appeared to link changes in criminal thinking to reduced disciplinary infractions.

		the need for a cognitive intervention based on their pattern of rule-violating behavior or mental health needs, as well as individuals who are referred for the program by security staff, were prioritized for inclusion. There were no negative security consequences for individuals who choose not to participate or who choose to stop participation once they began. There was also no formal security incentive for participation in the program. (275)	have increased or decreased criminal thinking and disciplinary infractions without the presence of an intervention (i.e., history and maturation effects). Third, participants can change in settings where participants receive little attention and are energized to change by any attention. The psychological changes may have been due to simply participating in an intervention program, regardless of its content." (279)	
35) Kersten et al. (2016)	"This study investigated whether higher attendance in a skills-based group therapy program designed for inmates was associated with fewer rule infractions as reflected in the number of disciplinary reports received in a state correctional system." (37)	Design was a retrospective analysis that included all but the highest risk/need incarcerated individuals. "Inmates were referred by a mental health professional, case worker, or correctional officer, or they were self-	**1 -** Study target population included all incarcerated individuals (male and female) in the state who had participated in the START NOW program between 2010 and 2013. Study had no comparison group.	"Results indicate a significant reduction in the receipt of disciplinary reports in the post program period with a greater number of sessions attended. A 5% decrease in the incident rate of disciplinary reports was found for every session attended. Despite the structural constraints present in correctional settings, such as frequent movement across facilities, this finding suggests that every effort should be made to retain participants in the program." (40-1)

	Start Now is an evidence-informed coping skills therapy designed for incarcerated individuals. (Connecticut DOC)	referred. No restrictions on primary psychiatric diagnosis or history of infractions were placed on participation beyond exclusion of inmates in segregation. Initially, the data contained 1,112 records. After data cleaning, there were 946 participation events, representing 846 unique inmates." (38)		"[H]igher risk groups benefited most from more program participation. This suggests that when there is a waiting list of potential program participants, priority should be given to members of the groups with higher security risk. All diagnostic groups appeared to benefit from greater participation, although some groups more than others. In particular, inmates with anxiety, personality, and psychotic disorders had the steepest downward predicted number of disciplinary reports with more sessions attended." (41)
36) Lester et al. (2020)	Research examining the efficacy of cognitive behavioral therapy (CBT) in reducing recidivism, with specific attention on how treatment factors (risk needs responsivity, or RNR) contribute to outcomes. (Participants were adult males in custody in Canada.)	"NOTE: the data set used was approximately 20 years old at the time the study was published. The data set was selected due to the adequate sample size for the proposed analyses and the fact that a comparable longitudinal data set of similar quality would require an excessive amount of resources." (831)	**1 -** Study is a reanalysis of existing data through a CBT/RNR framework. Initially the study was a quasi-experimental design with 2 treatment groups and one comparison group, with no indication of random assignment. "A final sample of 448 persons in custody were used for the analyses. Of these participants, 46.20% (*n* = 207) were exposed to a 100-hr treatment program, 23.00% (*n* = 103) were exposed to 200-hr, and 38.80% (*n* = 138) were not exposed to	"Individuals belonging to the profile characterized by reduced posttreatment criminal attitudes in both dosage groups had the lowest rates of recidivism at 12-month follow-up relative to the no-treatment group." (841) The authors assert, "[t]his study emphasizes three overarching factors: (a) antisocial personality and patterns, (b) treatment motivation, and (c) overall risk level. Of these factors, antisocial personality and behaviors (a facet of risk level in this study) was most predictive of responsiveness to treatment." (841)

			any dosage of treatment." (834)	
37) Maroney et al. (2021)	The effectiveness of the 8-week mindfulness-based cognitive therapy course for depression within a prison population is assessed. This study examined how a manualized mindfulness approach to treating depression, would affect a cohort. (Research was conducted in a male prison in the UK.)	Open trial design: no comparison group used. A mindfulness-based cognitive therapy (MBCT) program focused on teaching structured skills was administered. These skills can help participants to lower rates of anxiety, depression, and suicidality. They would also learn to recognize when their mood was lowering and to be able to do something about this before it became too difficult. Twelve participants initially attended. However, one subsequently left voluntarily and four were moved to other prisons. The remaining seven completed the program. (199)	**1 -** Pre-post comparisons of participant perceptions after 8 weeks of the MBCT program. Overall validity of results hampered by small sample size and lack of definite measures. The authors state, "[t]his was an audit of a single program in one establishment; consequently, generalizations need to be treated with extreme caution." (202)	"Participants expressed the view that the program needed to be longer as their circumstances were different from a more traditional depression group, with added difficulties in the type and range of emotion felt and issues around safety in the group. They all considered that they benefited from mindful movement and that this was a breakthrough for them, in terms of noticing a reduction in hyperarousal states and generally helping with extreme aches and pains in the body." (200)
38) Timmerman & Emmelkamp (2005)	Examination of "the effects of an intramural cognitive-behavioral treatment for forensic inpatients with personality disorders in a	"The participants were 39 inpatients of the Forensic Psychiatric Center Veldzicht. In their first year of	**1 -** No control or comparison group used "because it was considered unethical to withhold potentially	"Results of the study suggest that multidisciplinary cognitive behavioral intramural treatment in a high security hospital is effective in improving coping skills, interpersonal functioning, and well-being of offenders with serious personality disorders, but the

	high-security hospital. Treatment was aimed at modifying maladaptive coping and social skills, at enhancing social awareness, at reducing egoistic and oppositional behaviors, and at reducing psychological complaints. The patients all had committed serious crimes (violence, arson, sexual offences).” (590) (Study was a psychiatric hospital in the Netherlands.)	involuntary commitment, patients were asked to participate in a therapy outcome study. Of the 60 patients who were selected to participate, 10 refused. Another 11 participants were incapable participating.” (593)	helpful (elements of) treatment from patients.” (604) “Participants completed several self-report measures that were either used for treatment outcome measurement or for additional diagnostic purposes. The self-report questionnaires were administered by computer. Every 6 to 8 months, the patients were reexamined using nearly all self-report measures as were used at baseline. Two members of the staff filled in a standardized observation scale, parallel to the information supplied by the patients themselves, with reference to the functioning of the patients.” (593)	results are limited. Though the emphasis of the multidisciplinary treatment was very much on the cognitive behavioral milieu, it is impossible to attribute treatment outcome exclusively to this specific element of treatment.” (600) “After 2 1/2 years of treatment, patients also were less likely to react with anxiety, fear, anger, or aggression in stressful situations. These changes could also be related to treatment in which patients are encouraged to be open about their feelings and are taught alternative behaviors to cope with unpleasant feelings and stressful situations. Patients reported significantly fewer avoiding coping strategies and more social support seeking coping strategies than at baseline. With respect to assertiveness, patients reported less anxiety in interpersonal assertive behaviors, though they were not acting assertively more frequently.” (602)
39) Walters (2017)	Lifestyle Issues class: 10-week cognitive behavioral intervention for men Note: this study is a re-analysis of data collected by the researcher almost two decades earlier.	Quasi-experimental design: pre-post program comparisons, with separate wait list control group Sample: 219 volunteers participated in class between May 1999	**1 -** Weak research design; Wait list Control group (n=49) was not comparable to the original treatment group. Small sample size was also a limitation noted by researcher.	Criminal Thinking at the pre-test level varied. “Prisoners who displayed a drop in GCT scores between pre-test and post-test levels were significantly more likely to show a reduction in prison misconduct, whereas prison misconduct was likely to escalate among those who displayed a rise in criminal l thinking scores from pre-test to post-test.” (457) The author notes the following:

	(Medium-security federal correctional facility in the Northeast)	and July 2002; 21 received the intervention immediately and 198 after a period on wait list.		"Even though the PICTS GCT score normally correlates negatively with prison misconduct (Walters, 2007; 2012), the lowest scoring participants (GCT<T-score of 50) from the current study were at increased risk for poor institutional adjustment after participating in the Lifestyle Issues cognitive behavioral program. Hence, inmates presenting with low levels of criminal thinking at the beginning of a cognitive behavioral intervention were at increased risk for elevated prison misconduct." (465)
40) Wolf et al. (2012)	Seeking Safety Program (Unspecified location)	Open trial design: no comparison group used, but program completers were compared to non-completers. "Of the 111 assigned to Seeking Safety, 74 (67%) completed the program, i.e., they were enrolled at the beginning and end of the intervention (70%). Note: "People "completed" the program if they had no more than two unexcused absences (absences were excused for medical, legal, or personal visits, or institutional irregularities that	**1 -** Pre-post comparisons of the total score for the PTSD checklist and Global Severity Index (GSI) for women who completed the SS program. Several limitations of this study were noted by authors, including lack of a control group, high drop-out rate (33%), no measures of substance use, and no post-program follow-up data. (708)	"Clinical results of this open trial offer support for the effective treatment of PTSD among female inmates with PTSD, SUD, and other serious mental illnesses. Treatment completers showed significant improvements from pre- to post-treatment on overall PTSD symptoms and global severity of illness, with medium effect sizes for both domains. On average, for the full sample of completers scores decreased by 8.5 points, a 22% reduction from the baseline average." (708)

		prevented movement) and did not voluntarily drop out of the program." (705)		
41) Zlotnick et al. (2003)	Original pilot study of Seeking Safety (SS) Therapeutic Community treatment program for women with substance use disorder and PTSD (Unspecified location)	Pilot study with a sample size of 17 incarcerated women with co-occurring PTSD and SUD. Participants PTSD and substance use was examined at 3-months post program completion; recidivism was also examined at 3-moth post-release.	**1 -** Pilot study with a small sample (n=17) and no control group.	33% return to prison rate 3-months post-release, but improvements noted at 3-month follow-up in PTSD and SUD, as measured by clinical interview and urinalysis. "Overall, our data suggest that Seeking Safety treatment appears to be appealing to incarcerated women with SUD and PTSD and that the treatment has the potential to be beneficial, especially for improving PTSD symptoms. However, these findings are tentative given that there was no control group." (99)
42) Randall et al. (2019)	The CBT for insomnia intervention was a single CBT session of 60-70 minutes paired with a self-management pamphlet. The session addressed the body's natural sleep cycle, factors impacting sleep, and sleep restriction. The pamphlet addressed stimulus control, cognitive control, and the use of imagery distraction techniques. (UK prison)	30 subjects who were self- or staff-referred to the Mental Health team with a principal complaint of acute insomnia and at least 6 months remaining on their sentence were selected for the study. Acute insomnia was defined using DSM-5 criteria, but with a duration between 2 weeks to 3 months. Pre- and post-test measures included the Insomnia Severity Index (ISI), a Patient Health Questionnaire	**1 -** "Paired *t*-tests were used to determine significant differences between pre and post scores on the ISI, GAD, and PHQ. Additionally, paired *t*-tests were undertaken on sleep diary derived measures of SL, WASO, TST, and SE." (832) "Within group Cohen's d_z's were calculated to examine the effect size of changes in the scales." (832) Limitations noted in the study include the lack of a control group, the limited	Participants experienced a significant reduction in ISI and GAD scores and depressive symptomatology 4 weeks post-intervention. Significant increases in TST and SE and significant decreases in SL and WASO were also noted. Calculated effect sizes using group mean change scores were all moderate to strong ranging between .77 and 2.35. Remission rates based on ISI score changes were 73.33%, and compliance was 90%, with compliance defined as adherence to prescribed time to bed or prescribed time out of bed in the first week post-intervention.

		(PHQ), a Generalized Anxiety Disorder assessment (GAD), and a daily sleep diary used throughout the study period. Sleep diary measures included sleep latency (SL), wake after sleep onset (WASO), total sleep time (TST), and sleep efficiency (SE). . Pre-test measures were completed 1 week prior to the intervention and post-test measures were completed 4 weeks post-intervention. Remission status was defined as a reduction of >7 points on the ISI.	follow-up period, the fact some subjects participated in additional support sessions, and the small sample size.	
43) Nixon et al. (2006)	A psycho-educational gambling program focused on awareness of gambling and problem gambling, cognitive distortions, and attitudes towards gambling. The program consisting of 6, 90-minute sessions delivered twice a week for 3 weeks. Program content was presented by a facilitator and	Subjects volunteered for the program. Subjects were surveyed at the beginning and end of the program using a combination of problem gambling instruments to measure any changes in their awareness of problem gambling, attitudes towards	**1 -** "Paired *t* tests were conducted to test for changes in attitudes, cognitive errors, odds calculation, gambling frequency past year, CPGI, and SOGS past year." (7) Limitations of the study included the lack of a control group, the relatively small sample	"Gambling screen results revealed a significant increase in cognitive error recognition, and attitudes towards gambling became significantly more negative. The program did not render any significant differences in math skill score, Canadian Problem Gambling Index (CPGI) score, or past-year South Oaks Gambling Screen (SOGS) score." (1)

	supported by interactive workbooks. (The program was delivered from 2002-2004 at the Lethbridge Correctional Facility in Alberta, Canada.)	gambling, odds (math) calculation skills, cognitive skills, and behavior. Pre- and post-program assessments included the Canadian Problem Gambling Index (CPGI), the South Oaks Gambling Screen (SOGS), and a gambling questionnaire aimed at cognitive errors, attitudes, and odds calculation. 71 subjects completed the initial assessment, but due to attrition only 49 subjects completed the psycho-educational program and post-program assessment.	size, the program's limited duration and focus on cognitive distortions.	