An Evaluation of a Group Counseling Intervention for Inmates with Mental Illness

Robert Michael Cox

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AN EVALUATION OF A GROUP COUNSELING INTERVENTION FOR INMATES WITH MENTAL ILLNESS

by

Robert M. Cox

A Dissertation

To be Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Education

Major: Counseling

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Acknowledgements

“Standing on the shoulders of giants.”
Sir Isaac Newton

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Abstract


The U. S. criminal justice system is the largest provider of mental health services in the country. However, the criminal justice system is not prepared to meet the complex needs of offenders with mental illness (OMI). This study used a quasi-experimental design to evaluate the pilot Adult Recidivism Reduction Alternatives (ARRAY) program as a treatment for commonly reported symptoms of mental illness. The Emotional Problems Scales (Corrections) was used to measure participants’ symptom levels on the anxiety, depression, PTSD, and low self-esteem scales as measured at pre- and post-intervention. ARRAY is a group counseling intervention that combines Control Theory, individual psychology, and cognitive-behavioral technologies in a treatment model designed by the author. The findings of the study are that participants who completed the ARRAY program experienced reductions in symptoms of depression, posttraumatic stress disorder, and low self-esteem, but not anxiety. Program graduates have a lower rearrest rate than other offenders.
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An Evaluation of a Group Counseling Intervention for Inmates with Mental Illness

The United States incarcerates more of its citizens than any other country (Schmitt, Warner, & Gupta, 2010). In 2008, the incarceration rate was 753 persons per 100,000 (Schmitt et al., 2010). At the end of calendar year 2013 an estimated 1,574,700 inmates were held in state and federal prisons in the United States, an increase of 4,300 prisoners over year end 2012 (A. Carson, 2014). During calendar year 2012, 356,268 offenders with severe mental illness (OMI) were incarcerated in American jails and prisons (Torrey et al., 2014). In 44 states, a prison or jail in that state houses more persons with serious mental illness than the state’s largest remaining public psychiatric hospital (Torrey et al., 2014). Recent news media reports proclaim that the three largest mental health providers in the nation are county jails in California, Illinois, and New York (Arceneaux, 2013).

Many interventions exist to divert OMI out of the criminal justice system and into the mental health treatment system with the hope that effective treatments will prevent criminal behaviors and reduce the census of jails and prisons. Popular first generation (Epperson et al., 2014) strategies that focus on diverting OMI out of the criminal justice system include jail diversion programs, law enforcement crisis intervention teams, mental health courts, and Forensic Assertive Community Treatment and Forensic Intensive Case Management models. Community re-entry programs assist OMI with the transition back into their communities by brokering linkages between OMI and appropriate support services with the intention to reduce recidivism (Hartwell & Orr, 1999). Despite the efforts exerted to create an effective diversion system, the number of OMI continues unabated (Epperson et al., 2014) and attempts to keep persons with mental illness out of the criminal justice system absorbed the few resources committed to support for criminal justice-based treatment programming.
Recidivism rates alone indicate that, while predominate, the deterrence philosophy utilized in the American criminal justice system perpetuates a system that does not meet the needs of OMI (Schmitt et al., 2010). Ninety-five percent of incarcerated OMI will return to their communities at some point, with 637,400 inmates released from state and federal prisons in 2012 alone (E. A. Carson & Golinelli, 2013); (Cloyes, Wong, Latimer, & Abarca, 2010). The Bureau of Justice Statistics reports that 68% of prisoners released from state prisons in 2005 were rearrested within three years and 77% within five years (Durose, Cooper, & Snyder, 2014).

For OMI, the picture is starker. OMI recidivate twice as fast as offenders without serious mental illness (Cloyes et al., 2010). In one study ($n = 147$), 64% of OMI were rearrested within 18 months and 48% were hospitalized in the same period (Lovell, Gagliardi, & Peterson, 2002). OMI are more likely than other prisoners (47% vs. 39%) to have served three or more prior correctional sentences (D. J. James & Glaze, 2006). OMI in state prisons were adjudicated to a mean maximum sentence five months longer than those without mental illness (D. J. James & Glaze, 2006). While persons with serious mental illness are 1.5 times as likely to be incarcerated as to be hospitalized for treatment of their psychiatric disorders, they are less likely to receive treatment for their mental illness while incarcerated (Morrissey, Meyer, & Cuddeback, 2007).

Persons with mental illness are over-represented in the criminal justice system at a rate of up to 5:1 when compared to the general population. Prevalence rates for OMI are 14.5% for men and 31% for women (Steadman, Osher, Robbins, Case, & Samuels, 2009). The prevalence rate for mental illness in the general population is estimated to be 5.7% (Kessler, Chiu, Demler, & Walters, 2005). The most recent survey research has revealed that an estimated 356,268 OMI were in a correctional facility during 2012; thus, the U. S. correctional system serves up to
1000% more people with severe mental illness than state psychiatric hospitals (Torrey et al., 2014).

Men with mental illness are at higher risk for sexual assault from other inmates and staff (Blitz, Wolff, & Shi, 2008). Research by Crisanti and Frueh (2011) indicates that inmates with mental illnesses are up to eight times more likely to be victims of sexual abuse than non-mentally ill inmates. Male OMI are also at higher risk for physical, even lethal violence in prison, consequently, they are likely to use outward-directed aggression as protection and present high levels of arousal and hypervigilance (Blitz et al., 2008).

One-third of all U.S. prisoners report current symptoms of mental illness (Steadman et al., 2009) and more persons with mental illness are found in the criminal justice system than in the community behavioral health system (Torrey et al., 2014). OMI will recidivate twice as fast as offenders without serious mental illness (Cloyes et al., 2010). Forensic systems assume treatment for offenders with mental illness does not work (Andrews & Bonta, 2010; Morgan et al., 2012; Snyder, 2007), thus few resources are allocated for treatment of mental illness. As a result, evidence-based pre-release treatment programs targeting the specific needs of OMI are virtually non-existent.

The costs of crime and punishment are immense. The tangible costs of crime are estimated in the tens of thousands of dollars per offense (McCollister, French, & Fang, 2010). The average cost to incarcerate a federal prisoner in 2011 was $28,893 (Bureau of Prisons, 2013). The annual cost to incarcerate a prisoner with mental illness is estimated at $45,000 (C. Packard, personal communication, August 27, 2013). The costs of crime, and subsequent punishment, extends to prisoners, who may develop disabing psychological conditions and face
social factors that present long-lasting re-entry challenges and additional societal expense (Lad, 2013).

Pre-release programming that includes intentional self-change, symptom management, coping skill development, and relapse prevention planning can prepare OMI for re-entry. Treatment for prisoners could also help the criminal justice system carry out its crime deterrence mission by encouraging participants to practice effective self-care and the management of symptoms of mental illness during incarceration. Effective treatment has been shown to (a) decrease the social costs associated with crime, (b) reduce prisoner management costs, (c) reduce recidivism, (d) promote criminal desistance, (e) promote psychological recovery, (f) increase prisoner institutional adjustment, (g) decrease the personal costs of offending and incarceration to OMI, and (h) increase the prosocial engagement of OMI (Morgan et al., 2012).

**Problem Statement**

The problem to be considered in this study is how state prisons can, given their resource restrictions, better prepare inmates with mental illness for re-entry into their communities with increased odds of desisting from criminal behavior. The remainder of this chapter will review the interlocked problems of the number of OMI and the restricted therapeutic responses accessible by them while incarcerated. In the next section, an overview of the history of mental illness in correctional settings, demographic indictors of OMI, and the symptoms of mental illness found in prisons will be presented. A following section will discuss ideal and routine mental health treatment continua in state prisons. The final section will describe a proposed adjunctive counseling program designed to assist OMI to adjust to the institutional environment while they prepare for discharge.
Historical Overview

The often co-mingled problems of criminal behavior and mental illness are not novel to the early 21st century. Approaches to care for those who are unable to care for themselves and to punish criminals pass through cycles of reform-institutionalization-reform across the history of civilization. American policymakers have struggled with this problem continuously since the beginning of the United States of America over 230 years ago.

Kirkbride Plan

Until 1820, U.S. prisons and jails routinely housed mentally ill persons (Torrey et al., 2014). Thomas Story Kirkbride, M.D., responding to a crisis of inappropriate, and even harmful, treatment for mental illness in the mid- to late- 19th century, blueprinted the Kirkbride Plan as an alternative to criminal justice responses to mental illness. The Kirkbride Plan, founded on the philosophy of the Moral Treatment model of mental illness, promoted the belief that patients treated with kindness and sympathetic care improved more than the those who were jailed because of their mental illness (jhansan, n.d.).

The physical architecture of the Kirkbride Plan emphasized the virtues of nature and beauty in the care of persons with mental illness. For institutions built mainly between 1848 and 1890, the Kirkbride Plan was a popular model and many facilities were built across the country where the mentally ill and their families could reside. Existing Kirkbride Plan facilities remain in Bolivar, Tennessee, Kankakee, Illinois, and Morganton, North Carolina (KirkbrideBuildings.com, 2015). By the 1950s, state psychiatric facilities, suffering from the cumulative effects of limited funding and neglect, were no longer providing appropriate care. The costs of maintaining deteriorating facilities, combined with the promise of antipsychotic medications as a cure for mental illness, drove policy reform efforts that resulted in passage of
The Community Mental Health Act of 1963. This law attempted to re-create the mental illness treatment continuum by creating a national network of mental health centers to transition persons living in state hospitals into community settings.

**De-institutionalization**

Unfortunately, the ideal system envisioned by policymakers was underfunded and many of the \textit{de-institutionalized} former patients of state psychiatric hospitals ended up homeless, drug addicted, and separated from positive support systems. By the 1970s, as former state hospital patients began to show up in jails and prisons, de-institutionalization became linked with the controversial narrative of the \textit{criminalization of mental illness} (Epperson et al., 2014). In the 1980s, federal funding for community mental health centers was capped, and public policy shifted toward support for a criminal justice response to social problems. Consequently, relatively long prison sentences for relatively minor status crimes related to addictive behaviors and the symptoms of mental illness started prison censuses climbing. Now, over a hundred years after Kirkbride, prisons have again become the largest residential providers of mental health care in the country. The U. S. system for punishing criminals is, once again, the \textit{de facto} policy response to mental illness (Torrey et al., 2014).

**Definition of Offenders with Mental Illness**

**OMI Defined**

Persons with mental illness incarcerated in state prisons (OMI) are a poorly understood population. The U. S. Bureau of Justice’s most recent national data on mental illness in prison is over 10 years old (D. J. James & Glaze, 2006). There is no consensus definition of OMI in the literature on mental illness among forensic populations. Researchers differ in their methodology of defining symptomology and prevalence of mental illness. Therefore, the purpose of this
section is to describe OMI in general and set a benchmark useful for comparison to the population of this study.

Specific demographic variables used in this study are gender, race, age, marital status, and educational achievement. Additionally, history of mental health treatment and history of incarceration are included because these are important in understanding the emotional stability of OMI as well as their risk for recidivism.

**Gender, race, age.** Women are more likely than men to report symptoms of mental illness. Seventy-three percent of women in state prisons reported a mental health problem while 55% of men reported symptoms (D. J. James & Glaze, 2006). The racial breakdown of prisoners experiencing symptoms of mental illness is reported as Asians, Native Americans, and persons of multiple racial backgrounds (62%), white (62%), black (55%), and Hispanic (46%) (D. J. James & Glaze, 2006). Prisoners under the age of 24 years old are most likely to report symptoms of mental illness (63%), followed by those 25-34 years old (58%), 35-44 years old (56%), 45-54 years old (51%); those older than 55 years old (40%) were least likely to report symptoms (D. J. James & Glaze, 2006).

**Education.** Correctional populations have lower educational attainment than the general public. A downward educational trend was observed in both the lower educational achievement of younger prisoners when compared to older prisoners and a drop in overall educational achievement by prisoners between 1991 and 1997 (Harlow, 2003). The Bureau of Justice Statistics’(1997) Survey of Inmates in State and Federal Correctional Facilities is available for access online (Bureau of Justice Statistics, 2006). A report of all prisoners in state facilities for the variable “education“ revealed that the educational achievement levels for state prisoners is: less than 5 years of school (2.1%), more than 4 years and less than 9 years of school (10.7%), at
least some high school (69.5%), at least some college education (15.3%), and at least some graduate school (1.7%).

**Marital status.** The Bureau of Justice Statistics’ (2004) Survey of Inmates in State and Federal Correctional Facilities is available for access online (Bureau of Justice Statistics, 2006). A report of all prisoners in state facilities for the variable “marital status” revealed that the marital status for state prisoners is: married (26.3%), widowed (2%), divorced (20.9%), separated (5.8%), and never married (44.7%).

**History of incarceration.** James and Glaze (2006) report that 20.5% of mentally ill state prisoners and 27% of state prisoners without mental illness are first time offenders. OMI are more likely to be violent recidivists when compared to non-mentally ill prisoners (47.4% versus 39.2%, respectively). In addition, 32% of OMI are non-violent recidivists while 33.8% of those without mental illness committed earlier non-violent crimes.

**Symptoms of mental illnesses found in prison.** James and Glaze (2006) report that 49% of state prisoners reported symptoms of a mental health disorder in the previous 12 months. Symptoms of mania (e.g., psychomotor agitation, persistent anger or irritability) were most frequently reported (43% of respondents). The most commonly reported symptoms of depression were psychomotor agitation (40%), insomnia or hypersomnia (40%), persistent anger or irritability (38%), anhedonia (35%), feelings of worthlessness or guilt (35%), changes in sexual interest (34%), changes in appetite (32%), and diminished concentration (28%). Twelve percent of state prisoners reported experiencing delusions in the previous year and eight percent reported hallucinations.

The least commonly reported depressive symptom was history of a suicide attempt (13%). Insomnia, a frequently reported symptom of chronic depression, was reported by 61% of
prisoners. Insomnia is linked to increased odds of OMI making a suicide attempt, having an associated mental illness, reporting childhood trauma experiences, abusing substances, and reporting state anger and impulsive-aggression (Carli et al., 2011).

Co-occurring mental illness and substance use disorders are highly prevalent. Twenty-four percent of state prisoners met criteria for a substance use disorder and 42% of those with a mental health problem also met criteria for co-occurring alcohol or drug dependence (James & Glaze, 2006).

**History of treatment received.** James and Glaze (2006) report that a significant number of state prisoners received mental health treatment at some point during their life. Moreover, a positive upward trend in treatment received is visible in the data. First, for all state prisoners, the number reporting ever having any mental health treatment rose from 28.3% in 1997 to 31.2% in 2004. Second, those reporting any treatment received after admission to the prison rose from 17.4% to 19.3%. For state prisoners with mental illness, only 49.3% reported ever receiving any mental health treatment. Of these OMI, 22.3% reported receiving mental health treatment in the year prior to arrest and 33.8% reported receiving mental health treatment following admission to the facility.

**Mental Health Treatment for Prisoners**

In many correctional facilities, the mental health treatment system is restricted to meeting the basic, immediate needs of inmates as efficiently as possible. In an environment of constant pressure for efficient use of health care budgets, there are simply more OMI than the system can accommodate (Hollenbeak, Schaefer, Penrod, Loeb, & Smith, 2015). Chronically scarce financial resources can limit treatment systems, restricting inmate access to services, to a point of ineffectiveness that may detract from recidivism reduction goals. The most reported factors
restricting treatment provision in correctional settings are budgetary constraints (71%), space limitations (51%), and a limited number of counselors (39%). A lack of volunteer participants was reported by 18% of survey respondents, pointing toward a demand for treatment services among OMI (Center for Substance Abuse Treatment, 2005).

**History of Prisoner Rehabilitation**

Cullen and Gendreau (2001) outline a three-phase history of correctional interventions designed to rehabilitate prisoners and promote desistence of criminal behaviors. The initial phase begins with the positivistic attempts of early modern criminologists in the late 19th century to understand the social and psychological causes of crime. A second period, *nothing works*, in the late 1960s and 1970s, may be termed an anti-rehabilitation phase as researchers’ rejected positivism in favor of research approaches incorporating the perspectives of communities disproportionately affected by criminal justice policies. Since the 1980s, the current, third phase, *what works*, is marked by efforts to describe research-supported reductions in crime and mental illness.

**Phase 1.** The first phase began in 1893 with McDonald’s attempts to understand the causes of crime through the psychological and physical study of the criminal (Cullen & Gendreau, 2001). McDonald defined modern criminology and crime prevention through the correction of the social conditions in which children were raised; reform schools and prisons were developed to shape the moral and social education of delinquents. Sutherland (1939) discussed persistent recidivism as a driver of crime, and, after the techniques of inflicting pain and isolation on individual criminals were discredited, sought a solution through integration of those at-risk for criminal behavior into non-offending social groups (Cullen & Gendreau, 2001). Sutherland is also credited by Cullen and Gendreau (2001) with the introduction of the
individualized correctional sentence. Sheldon and Eleanor Glueck (1950) produced a landmark study comparing 500 delinquent boys against a matched comparison group of non-delinquents. The Gluecks concluded that the causes of crime are complex and multi-faceted and that an individual needs assessment is required to target interventions that support individual and community goals (Cullen & Gendreau, 2001). Early research focused on structural responses to crime. In the 1950s, controlled research about human service programs began to appear in the literature. In 1954, Kirby’s review of the four extant scientific studies about correctional counseling introduced the problem of how to define treatment in a prison setting (Andrews & Bonta, 2010).

**Phase 2.** In the second phase, the conclusion that prisoner rehabilitation does not work spread throughout the criminal justice community. In the wake of the social upheaval of the late 1960s, crime was seen as a function of the state exerting control through social structures; thus, criminal behavior could only be moderated through change in the social structures themselves. In 1974, Martinson published an analysis of 231 correctional program evaluations conducted between 1945 and 1967 and concluded that nothing worked in recidivism reduction (Cullen & Gendreau, 2001). Cullen and Gendreau (2001) point out that Martinson's report included only 138 recidivism-related studies and that less than half of these studies evaluated a treatment-related intervention. Although unsupported empirically, the *nothing works* banner was taken up by criminologists. Well into the 1970s, even as Palmer and Martinson debated the evidence for effective evidence-based correctional programming, researchers and policy-makers focused on deterrence as the proper response to crime (Andrews & Bonta, 2010; Cullen & Gendreau, 2001). Today, prisons continue to promote the virtues of punishing OMI to establish prosocial attitudes and behaviors and to deter crime.
**Phase 3.** The current, third phase, is marked by a determination to scientifically construct evidence-based knowledge that has a negative effect on crime and recidivism (Cullen & Gendreau, 2001). The *what works* movement began in the 1980s as researchers outside of the U. S. criminology field began to report meta-analyses indicating positive outcomes for rehabilitation programs. Two lines of research have since emerged in the literature (McCormick, Peterson-Badali, & Skilling, 2015).

One line of research into the psychopathology of criminals begins with the idea that OMI are drawn into the criminal justice system because of their mental illness and that effective clinical interventions are required to reduce recidivism. This focus on clinical interventions is associated with efforts to divert persons with mental illness out of the criminal justice system. Contrasting with these psychopathology narratives is the line of research that views OMI as both criminal actors and persons with mental illness. The Risk-Need-Responsivity (R-N-R) model developed by Andrews and Bonta (2010) targets persons at high risk for re-offending for intensive cognitive-behavioral interventions to reduce recidivism. The R-N-R model views the behaviors and personality features of individual actors as the focus for intervention.

The search for treatments that work is focused on determining which program components are best included in an effective correctional treatment program (Snyder, 2007). Over the last decade, American psychologist Robert Morgan (2012) has led the development of research-based protocols that focus on the co-occurring issues of mental illness and criminogenic need commonly faced by OMI. However, recidivism reduction programming designed specifically for OMI remains in the development stages or in situation-specific applications not readily available for use by the criminal justice system as a whole.
System of Correctional Mental Health Treatment

Thirty-one percent of state prisoners used mental health treatment services prior to incarceration; less than 20% reported receiving mental health treatment during incarceration (James & Glaze, 2006). Many OMI, despite accessing community-based behavioral health services prior to incarceration, never receive prison-based behavioral healthcare. A correctional system charged with providing treatment for mental illness comparable with community standards for the provision of treatment for physical illness is hindered by a number of restrictions, including a limited workforce, appropriate housing for OMI, and effective programming (Blevins & Soderstrom, 2015; Daniel, 2007).

An Ideal Service Continuum

Effective treatment of mental illness is a multifaceted process. An ideal treatment system for OMI would include linkages across forensic and community service systems and have a solid foundation in the principles of psychosocial rehabilitation. Psychosocial rehabilitation services include a collection of support services collaboratively chosen by a service provider and service recipient to compensate for, or eliminate, functional deficits present for the recipient (Morgan et al., 2012). Mueser, Torrey, Lynde, Singer, and Drake (2003) present six components of an effective, evidence-based psychosocial rehabilitation system for persons with mental illness. These essential components are collaborative psychopharmacology, assertive community treatment, family psychoeducation, supported employment, illness management and recovery, and integrated dual disorders treatment. In an ideal system, treatment components are integrated, adequately funded, and provided by trained, compassionate staff with a focus on response to OMI’s individualized criminogenic risk factors (Meichenbaum, 2008). Additionally, effective treatment continua must have care coordination mechanisms that can be used to link persons
with mental illness as they change service providers. For OMI, bridging episodes of care between prison-based and community-based care is extremely important (Blank Wilson & Draine, 2006).

**Routine Correctional Service Continuum**

The most common elements of a prison mental health treatment array are intake screening for symptoms of mental illness, psychopharmacology, crisis intervention, and referrals for community-based services post-discharge (Brandt, 2012; Lovell et al., 2002; Steadman & Veysey, 1997). In 2000, a survey of state public and private correctional facilities found that 95% provided mental health services in the form of intake screenings (78%), psychiatric assessments (79%), counseling (84%), and psychotropic medications (84%) (Hills, Siegfried, & Ickowitz, 2004). The types of treatments received by OMI are an overnight hospital stay (3.1%), prescribed medication (15.1%), therapy from a mental health professional (12.7%), and any other mental health treatment (1.9%) (James & Glaze, 2006).

**Intake Screening.** When OMI first enter a correctional facility they are engaged in a number of processes collectively known as intake. During intake, inmates may receive a number of screening and classification assessments designed to guide the facility’s decision making about individual prisoners’ access to medical and mental health treatment and specialized risk reduction programming. Intake screening is one pathway for the identification of prisoners’ mental health treatment needs.

Inmate access to treatment services is individualized by institutional security and custody leveling guidelines. An inmate’s level of facility security determines the number of obstacles between them and the free world while their custody level, the amount of staff supervision needed for an inmate, determines what treatment services may be available to any individual.
inmate (Scott, 2009). The higher a prisoner's security level the less direct interaction with others is allowed; prisoners classified at higher security levels often require additional staff during intra-campus movement (e.g., for physician visits). Lower classification and security levels allow inmates to live in a group detention setting where they can directly interact with peers. The greater an inmates’ security level the more challenges exist for treatment providers. At the highest classification and security levels treatment providers may work through closed doors or in clusters of individual locked treatment pods while minimum security levels allow OMI to attend counseling groups face to face with peers.

**Psychiatric assessment.** If a psychiatric background is identified during intake screening OMI may be offered evaluation by a physician where psychotropic medications may be offered for symptom management. Proper medications and effective self-management techniques can mitigate symptoms of organic mental illness (Preston, O'Neal, & Talaga, 2013). In addition, the secure, compliance-oriented milieu of correctional facilities may promote adherence to dosage and frequency recommendations to a greater degree than in the community. However, acceptance of psychiatric services by inmates is voluntary.

When an inmate’s illness impairs their insight, judgment, and decision-making abilities they may not agree to the use of pharmacotherapies. While OMI are allowed to reject medical treatment, there are circumstances when medical intervention is necessary to protect an individual OMI (Levine & Gage, 2015). Assisted, or involuntary, psychiatric treatment is a rarely used tool in correctional settings. In *Washington v. Harper* (1990), the U. S. Supreme Court found that the use of involuntary medication to support the management of prisoners’ severe mental health symptoms is constitutionally permissible (Salem, Kushnier, Dorio, & Reeves, 2015). Assisted treatment, though, remains controversial due to the limited number of
published studies on efficacy of assisted medication therapies, potential for further funding reductions for psychiatric treatment for OMI, and increased stigma and exploitation of OMI by other inmates (Levine & Gage, 2015). The only study of the effect of involuntary treatment on the use of inpatient psychiatric hospitalization and disciplinary action found that disciplinary actions against OMI were reduced during the study, while there was no change in the number of inpatient hospital days used by OMI (Salem et al., 2015).

**Discharge planning.** The discharge planning function links OMI with re-entry services and supports. Discharge planners seek to link OMI with recovery-friendly housing, income, case management, and mental health treatments. The first two months post-release are a transitional time when prisoners are likely to experience pronounced stress, fear, anxiety, and disappointment (Binswanger et al., 2011; Shinkfield & Graffam, 2010). Effective pre-discharge planning is important in bridging the gap between the restricted, prescribed routines of prison and the self-structured routines of the street. Fontanarosa, Uhl, Oyesanmi, and Schoelles (2013) conducted a comprehensive review of pre-release treatment for OMI, determining from 16 international comparative trials that antipsychotic medications, discharge planning with Medicaid-application assistance, and integrated dual disorder treatment programs, appear to be effective interventions for OMI transitioning back to the community. However, virtually all OMI will be released back into their communities with little more than a phone number for support services providers, a limited supply of psychotropic medications, and without direct assistance accessing services, increasing their risk for psychiatric and criminal recidivism (Solomon, Draine, & Meyerson, 1994).

**Treatment access in the community.** Linkage to post-release services is an important factor for the successful community re-integration of OMI (Baillargeon, Binswanger, Penn,
Williams, & Murray, 2009). Barriers to a successful warm handoff can be sorted into two categories. First, there are systemic barriers. On one side, prisoners are unprepared to navigate access to services as well as the service systems themselves. On another side, outpatient community mental health systems may be reluctant to serve offenders due to lack of preparation to meet the needs of OMI. Second, stigma can block service access (Corrigan, 2004). OMI internalize stigma about their mental illness as well as their status as criminals. At the same time, service providers may have stigmatized views of former prisoners and expect OMI to be dangerous and unwilling to receive treatment for their mental illness.

Ex-prisoners, especially men, are reluctant to engage with community-based services that they perceive as impractical, inaccessible, and having insufficient contacts between the service provider and the recipient (Lovell et al., 2002). However, when OMI do engage with an outpatient community mental health provider they experience a reduced risk for recidivism. Services such as intensive case management and adherence to psychotropic medication recommendations are associated with greater use of treatment services and reduced criminal justice costs (Swanson et al., 2013; Theurer & Lovell, 2008). Effective, rapid linkage between the correctional facility and community services is a treatment service that strengthens desistance efforts.

The correctional mental health treatment system responds to the needs of OMI within the limits of its resources. The system is limited by an inadequate workforce and few evidence-based programs to adequately address the multilayered needs of OMI, who are at the greatest risk for poor institutional adjustment, exploitation by staff and other inmates, more extensive prison tenures, and increased difficulty during re-entry (Blitz et al., 2008; Draine & Herman, 2007; D. J. James & Glaze, 2006). Nor does the current treatment system predictably reduce criminal and
behavioral recidivism (Epperson et al., 2014). A more effective system would include pre-release group counseling that may promote recovery and relapse prevention while simultaneously addressing the criminogenic needs of OMI and linking OMI to community-based services (Epperson et al., 2014; Fontanarosa et al., 2013; Lurigio, 2011).

**A Solution: An Adjunctive Group Counseling Program**

The routine correctional behavioral health treatment services available and accessible to OMI, when compared to an ideal correctional mental health treatment continuum, includes a services gap. There is room in this continuum for the addition of adjunct group counseling programs to assist with institutional adjustment, provide treatment for symptoms of mental illness, promote desistance from antisocial behaviors, and prepare OMI for the re-entry transition upon discharge. Professional counselors provide an under-utilized resource correctional systems can tap for the development and delivery of effective evidence-based programming targeted to the needs of OMI.

**Role for Professional Counselors in Forensic Settings**

There is a greater need for behavioral health services in correctional settings than there is workforce to provide those services (MacKain, Myers, Ostapiej, & Newman, 2010). Building an effective prison treatment continuum requires expansion of the provider cadre working behind bars. Professional counselors can help fill the rolls of mental health treatment providers in correctional facilities and increase access to services to address serious and persistent mental illness, addictions, trauma-related disorders, sexual offenses, developmental disabilities, and co-occurring combinations of the foregoing.

Psychologists, nurses, and social workers are the most prominent mental health providers in corrections. Nurses and social workers collaborate with prescribers to monitor OMI and
prepare prisoner discharge plans while psychologists increasingly perform administrative tasks (Boothby & Clements, 2000). In a recent analysis of cost-effectiveness, Crane and Payne (2011) found that professional counselors provide economical, quality mental health treatment. In their study, they found that counselors are able to help consumers resolve problems within one episode of care in more than 85% of cases. Professional counselors are a resource that could fill workforce gaps in correctional mental health intervention systems.

**Counseling Programs Missing**

Adjunctive counseling practices, especially those that target co-occurring substance use disorders are largely missing from correctional treatment programming (Morgan et al., 2012; Rice & Harris, 1997). Several decades of treatment outcome research related to the specific needs of OMI has not significantly increased the number of programs being developed and tested with scientific rigor (Rice & Harris, 1997; Snyder, 2007). Morgan and associates (2012) found 26 randomized controlled clinical trials of programs designed for the needs of OMI. The lack of program development is partially attributable to two factors. First, the environmental restrictions of forensic settings limit rigid research structures, and, second, the investment required to develop an evidence-based program (EBP) is beyond the resources of most correctional systems (Daniel, 2007; Liebman et al., 2013; Morgan et al., 2012; Scott-Hayward, 2009).

**Adjunct counseling programs.** Pre-release adjunct counseling programs can prepare OMI for post-discharge success by adding relapse prevention planning, commitment to engagement with community mental health services, self-managed instruction, substance abuse specific programming, and treatment for distorted thinking to prison programming. Group counseling interventions that promote the use of coping skills such as challenging criminal thinking, alternative self-concept, relapse prevention planning, and prosocial interactions may
offer a promising compliment to medication alone. In the absence of these skills, OMI are at risk for substance use and psychiatric relapse (Daniel, 2007).

**Utility of counseling.** Without adequate intervention, these risks are notably higher among individuals with co-occurring psychiatric and substance use disorders (Blank Wilson, Draine, Hadley, Metraux, & Evans, 2011). Pre-discharge counseling interventions focused on symptom management and relapse prevention skills may help OMI prepare for less structured community settings. Research indicates that counseling interventions with OMI effectively reduce symptoms of distress, improve offenders’ ability to cope with their problems, result in the improvement of behavioral markers (e.g., institutional adjustment and behavioral functioning), and relate directly to significant reductions in psychiatric and criminal recidivism (Morgan et al., 2012).

Correctional mental illness treatment services are inadequate to meet the needs of offenders with mental illness from both the perspective of the prison census and the resources available to prepare OMI for discharge. An adjunctive counseling program can fill in the gap in available services that exists between medication management for acute symptoms and discharge planning.

**The Purpose of this Study**

**Conceptual Framework**

Mental illness is a brain disorder that causes distress for an individual and is manifested through the individual’s thoughts, behaviors, and level of functioning. Criminal behavior is a purposive behavior exploitive of individuals and communities. When individuals with mental illness repeatedly choose criminal behavior as a coping strategy they are at risk of exacerbating both their symptoms of mental illness and their involvement with the criminal justice system.
The conceptual framework for this study is that persons with mental illness can learn to manage their distress in prosocial ways that actively manage their mental illness and reduce their involvement in the criminal justice system to the benefit of themselves and their communities.

**Rationale**

The United States' correctional system was created to punish criminal behavior, and currently operates under the philosophy that punishment is a sufficient deterrent against future criminal behavior. However, since the 1980s, and increasingly so in the current climate of reduced funding for community-based treatment of mental illness and climbing correctional censuses, prison and jail administrators have been challenged with the task of treating mental illness within correctional settings (Morgan et al., 2012; Sarteschi, 2013; Torrey et al., 2014). The rationale for this study is that while appropriate treatment of mental illness in prisons will produce tangible benefits for both OMI and society, there are no evidence-based treatment programs designed specifically for OMI available for use by correctional mental health providers. This situation persists despite decades of efforts to determine what works in correctional treatment (Snyder, 2007). There are social justice, legal, and economic arguments that justify the use of pre-release interventions for OMI.

**Social Justice**

The social justice, or right to treatment, argument states that access to psychological services by persons with mental illness in the criminal justice system is an issue of dignity, fairness, and basic rights (Flores et al., 2014). The right of prisoners to mental health care equivalent to the care available in the community was established in 1948 with the adoption of the Universal Declaration of Human Rights (Exworthy, Samele, Urquía, & Forrester, 2012). Additionally, while most of the attention related to the costs of criminal justice activity focus on
the social costs to the community and society, there is an emotional and psychological cost to the offender that effective treatment interventions can reduce (Shinkfield & Graffam, 2010). OMI, though, often have more severe dysfunction than generally found in the community and forensic settings struggle to meet the demand for services, creating a situation where the minimum treatment standard of equivalent care is often unmet (Exworthy et al., 2012).

Legal

The 8th and 14th Amendments of the United States Constitution, as interpreted in case law, prohibit cruel and unusual punishments while it prescribes behavioral health care consistent with the evolving community standard (Caselli, 2013; Scott, 2009).

Economic

The economic argument is that appropriate treatment systems will reduce prisoner management costs as well as decrease the societal costs of crime. The economic costs of crime and punishment are immense and far-reaching. To house one individual in a state prison in Shelby County, TN. costs approximately $45,000 a year (C. Packard, personal, personal communication, August, 27, 2013).

Institutional adjustment. Institutional adjustment, as used in this study, is generally defined as the extent to which a person conforms to the prison environment. Adjustment is measured by instances of inmate misconduct; the fewer instances of offending behaviors by individual inmates, the higher the level of adjustment. OMI are more likely than non-OMI to be charged with misconduct while incarcerated (58% versus 43%) (D. J. James & Glaze, 2006). In one study, Lovell and Jemelka (1996) report that the fixed costs of prisoner misconduct are substantial, as the average cost incurred by forensic facilities is estimated at $970 per rule infraction.
Costs of medical care. T. Marshall, Simpson, and Stevens (2001) reported that male prisoners are 300% more likely to use healthcare systems than are community members. Improving inmates' psychological functioning will reduce incidence of illness and disease among older male offenders and associated healthcare costs (Merten, Bishop, & Williams, 2012). Niles and associates (2014) report that as anxiety and depressive symptom severity increased the chances of any person having asthma, heart disease, back problems, ulcer, migraine headache and eyesight difficulties also increased. Anxiety symptoms were independently associated with ulcer, whereas depressive symptoms were independently associated with heart disease, migraine, and eyesight difficulties.

Bekhuis, Boschloo, Rosmalen, and Schoevers (2014) reported a strong link between depression, anxiety, and cardiopulmonary, musculoskeletal, gastrointestinal, and general somatic complaints, which, for prisons, increases costs through inmates’ increased use of medical care. Feron, Paulus, Tonglet, Lorant, and Pestiaux (2005) reviewed the use of medical services by Belgian prisoners and found that prisoners visited primary care provider 3.8 times more than a comparable community sample. Visits were for administrative procedures (22%) followed by psychological (13.1%), respiratory (12.9%), digestive (12.5%), musculoskeletal (12%), and skin problems (7.7%). Seventy-one percent of the psychological visits to primary care providers were for complaints of anxiety, sleep disturbance, and prescription of psychoactive drugs. Age was found to mediate health concerns and use of medical services (Merten et al., 2012).

Recidivism. While more than 90% of prisoners return to their community, most recidivate quickly (Durose, Cooper, & Snyder, 2014) and those with serious mental illness are at an increased risk for rearrest. The majority of rearrests, for new offenses and supervision violations, occur during the first twelve months post-discharge (Lovell et al. 2002). In one study,
almost 90% of OMI discharged from prison were released on parole; 85% of those were rearrested on a technical violation while another 15% committed a new crime (Cloyes et al., 2010). For those who do not re-offend within 3 years of release, the odds of rearrest drop considerably (Greenfeld, 1985). Additional research is needed to determine the length of time from discharge to admission to an inpatient behavioral healthcare facility.

Co-occurring substance abuse is a significant predictor of recidivism for OMI (Baillargeon et al., 2010; Blank Wilson et al., 2011; Hall, Miraglia, Lee, Chard-Wierschem, & Sawyer, 2012) and is associated with a re-incarceration risk which is over 40% higher than those without a mental health disorder (Blank Wilson, Draine, Barrenger, Hadley, & Evans, 2014). A positive relationship exists between the degree of reported anxiety and recidivism risk factors, including substance abuse, suicide risk, and lifestyle instability (Coid & Ullrich, 2010).

**Purpose Statement**

The purpose of this study is to evaluate the Adult Recidivism Reduction Alternative (ARRAY) program, a research-based integrative group counseling model, with adult men with mental illness who are incarcerated in a state prison using the Anxiety, Depression, PTSD, and low self-esteem scales of the Emotional Problem Scales – Self Report Inventory (Corrections) (EPS-C; Daigle, Strohmer, & Lowe, 2015).

**The Significance of This Study**

The significance of this research is that it fills a gap in the effective treatments available for OMI. Routine screening for mental illness is part of the intake process at correctional facilities. When a mental illness is identified inmates may be referred for psychiatric evaluation and medication treatments. Crisis intervention in the form of movement to a de-stimulated environment (an isolation room) under close supervision and where pharmacotherapy can be
administered rapidly, if needed, is available in emergencies. OMI will be offered referrals for outpatient treatment during discharge planning. However, adjunctive counseling is usually not available for OMI. Counseling programs for those with co-occurring mental illness and substance use disorders are even rarer. The development of a group counseling program with a wellness orientation and relapse prevention component fits into this open treatment gap.

**Literature Review**

This chapter contains a review of the relevant literature on inmate psychological adjustment and the mental health concerns of prisoners. The aspects of adjustment and mental health to be reviewed are depression, posttraumatic stress disorder (PTSD), and low self-esteem as they relate to the ability of Offenders with Mental Illness (OMI) to cope with life behind bars and successfully reintegrate into society post-release. Four of these constructs (anxiety, depression, PTSD, and low self-esteem) are measured by the Emotional Problem Scales – Self Report Inventory (Corrections) (EPS-C; Daigle et al., 2015). Each construct will be reviewed in relationship to how participation in the Adult Recidivism Reduction Alternatives (ARRAY) program effects scores on the EPS-C. Prevalence of each variable and its relationship to inmate adjustment to the prison environment will be considered.

**Consequences of Inmates’ Emotional Problems**

Depression and anxiety, considered the psychological conditions most critical to an individual’s well-being (Shinkfield & Graffam, 2010), are endemic in prisons (Sarteschi, 2013; Torrey et al., 2014) and in the lives of OMI post-release (Schnittker, Massoglia, & Uggen, 2012) where they may experience functional disability and difficulty adjusting to the community. Incarcerated individuals have a tendency to externalize locus of control in ways that divorce them from assuming responsibility for their actions, experience higher levels of stress,
depression, anxiety, hopelessness, and worry, and have reduced capability to manage distress in ways that can have consequences for long-term functionality (Asberg & Renk, 2014).

**Prevalence of Mental Illness**

James and Glaze (2006) reported that one-third of prisoners indicated at least one *DSM-IV* depressive symptom, with many of those endorsing five or more symptoms. Drapalski, Youman, Stuewig, and Tangney (2009) found that 77% of jail inmates were positive for any behavioral disorder. The top psychological problems reported among OMI are traumatic stress (34.3%), mania (19.9%), paranoia (19.9%), depression (19.1%), schizophrenia (12.5%), anxiety (9.9%), obsessive-compulsive disorder (9.9%), somatic problems (8.8%), and specific phobia (4.7%). Almost 26% reported alcohol problems and 47% reported drug problems. Additionally, 30.9% of OMI responded to the items in ways indicative of borderline personality disorder features and 31.4% indicated antisocial features. The top problems reported by men were drug problems, antisocial thought patterns, traumatic stress, alcohol problems, mania, paranoia, and depression (Drapalski et al., 2009). OMI have higher levels of aggression and hopelessness than their counterparts who do not report mental disorders (Wolff, Morgan, Shi, Huening, & Fisher, 2011).

**Models of Prisoner Mental Status**

The effects of imprisonment are debated by sociologists and social psychologists, prisoner advocates and politicians, criminologists and academics, and, while there is no doubt that many prisoners have one or more mental health concerns, there is ongoing discussion of the extent to which imprisonment contributes to mental illness and prisoner disability. Haney (2012) offers three caveats about the interaction between prison and disability when considering the interactions between prison and mental illness. One, the effect of imprisonment is individualized
to each prisoner and cannot be generalized across facilities or group of prisoners. Two, the overwhelming majority of prisoners come from communities where powerlessness, stigma, and alienation from self and society are cultural features. Three, the psychological effects of prison are subtle and individualized to each prisoner.

**Importation versus deprivation.** Dichotomous models are present in the theoretical literature to explain the relationship between prisoner mental status and institutional misconduct (Dye, 2010). The *importation* model, built on the work of Irwin and Cressey (1962), states that prisoner adaptation styles, behavior patterns, demographic, social, and psychological characteristics are imported into prison by the prisoners themselves who use prison as an opportunity to practice criminogenic behaviors (Dye, 2010). Essentially, prisoners recreate their antisocial culture in prison when they are incarcerated. The *deprivation* model, a derivation of the separate work of Clemmer (1940), Goffman (1961), and Sykes (1958), states that the strain of imprisonment and the loss of security, autonomy, liberty, and goods and services creates an environment where prisoners use violence, aggression, anxiety, depression, distress, and suicide as coping tools (Dye, 2010). In other words, prison contributes to, if not creates, prisoner disability.

**Explanatory power of the models.** Data is mixed on the explanatory power of both models as studies support some iatrogenic effect of incarceration as well as healthy adaptation by prisoners. In support of the importation model, Schnittker et al. (2012) examined the relationship between incarceration and psychiatric illness using the National Comorbidity Survey Replication database (*n* = 5692). They found that the most common illnesses among former inmates appear prior to incarceration, lifetime disorders are more associated with crime than are current disorders, early substance abuse is a risk factor for imprisonment and psychiatric disease,
and that jail-induced mood disorders are strongly related to post-release disability. In support of the deprivation model, Walker et al. (2014) reviewed 15 longitudinal studies and determined that the extant research literature suggests incarceration, facility size, and population density are related to negative mental status, although, time in prison is a moderating factor for mental status. So, while the origins of prisoner mental illness and the mediating effects of incarceration remain poorly defined, the need for clinical intervention with OMI is clear.

**Study Variables**

**Anxiety**

**Definition.** In the broadest sense, anxiety is a normal reaction to stress. However, when stress reactions become excessive, chronic, disproportionate to the environment, or apparent without a notable stressor normal anxiety turns debilitating. Excessive, irrational fear and dread define the anxiety disorders. The anxiety disorder spectrum includes panic disorder, generalized anxiety disorder (GAD), agoraphobia, specific phobia, social phobia (SAD), posttraumatic stress disorder (PTSD), obsessive-compulsive disorder, and separation anxiety disorder (Diagnostic and Statistical Manual 5th edition; American Psychiatric Association, 2013). In the DSM-5, the anxiety disorder spectrum is arranged into the categories of classical anxiety disorders, trauma- and stressor-related disorders, obsessive-compulsive and related disorders, and dissociative disorders (Wittchen, Heinig, & Beesdo-Baum, 2014). Common anxiety signs and symptoms include: nervousness, powerlessness, sense of impending danger, fast heart rate, palpitations, feeling sick, shaking (tremor), sweating, dry mouth, chest pain, headaches, fast breathing, and trouble concentrating or thinking about anything other than the present worry.

**Prevalence.** Anxiety disorders are a common psychiatric problem in prison. Prevalence results are above those found in the general population (Allnutt, Wedgwood, Wilhelm, & Butler,
Drapalski et al. (2009) report prevalence of anxiety spectrum disorders among OMI as traumatic stress (34.3%), anxiety (9.9%), obsessive-compulsive disorder (9.9%), and specific phobia (4.7%). Allnutt et al. (2008), using Cloninger's Temperament and Character Inventory (TCI), found a prevalence rate of 35% (n = 467) for anxiety disorders among prisoners.

**Consequences.** State anxiety can often function as an adaptive response in correctional facilities where a certain level of watchfulness is required to protect one’s space, belongings, and physical integrity. Hypervigilance, sleep disturbance, defensiveness, and irritability are commonly reported anxiety symptoms in prisons (Reinhardt & Rogers, 1998). However, the prevalence of the symptom hypervigilance, excessive environmental scanning with a preferential attention to threat (Freeman, Garety, & Phillips, 2000), does not seem to be reported in the correctional mental health literature. Forty percent of inmates in state prisons report sleep disturbance and 38% of prisoners reported irritability in the James and Glaze (2006) study.

Higher levels of anxiety were associated with a greater number of hallucinations, withdrawal, depression, hopelessness, better insight and poorer overall psychological functioning in persons with schizophrenia (Lysaker & Salyers, 2007). In primary care settings, generalized anxiety, posttraumatic stress disorder, panic disorder, and obsessive compulsive disorder are bidirectionally associated with hypertension and coronary heart disease (Player & Peterson, 2011). That is, people who have anxiety are more likely to have hypertension and coronary heart disease and people with hypertension or heart disease are more likely to have anxiety. For OMI, anxiety may be directly implicated in poorer adjustment to their environment, increased mental health symptoms, and increased risk for co-occurring medical problems. Inmate anxiety is associated with substance abuse and weapons violations (Felson, Silver, & Remster, 2012).
**Social Anxiety Disorder.** Social Anxiety Disorder (SAD) is a common anxiety disorder with lifetime prevalence rates ranging between 7% and 12% of the general population (S. G. E. Hofmann, 2010). SAD often presents in childhood and can be observed as shyness, behavioral inhibition, overanxious disorder, mutism, school refusal, and separation anxiety. If the problem is left untreated, it typically follows a chronic, unremitting course and leads to substantial impairments in vocational and social functioning (S. G. E. Hofmann, 2010). Plasencia, Alden, and Taylor (2011) present effective treatment strategies for SAD that includes teaching participants to use impression-management techniques to approach uncomfortable interpersonal situations. Skills such as excessive self-monitoring, rigidly observing and censoring behavior and speech, rehearsing what the person is going to say before and during social interactions, relying on prepared scripts, feigned expressions of interest, and inauthentic displays of nodding and smiling can be used to decrease social barriers and increase positive interactions with others. Persons with SAD are prone to use avoidance behaviors during interpersonal situations, and may, consequently, reinforce their own negative expectations. Examples of avoidance behaviors are minimizing talking, avoiding eye contact, and low self-disclosure.

**Depression**

**Definition.** The *DSM-5* (American Psychiatric Association, 2013) criteria for depressive disorders includes depressed mood for most of the day, for more days than not, as indicated either by subjective account or observation by others, for at least 2 weeks (major depressive episode). In addition to the presence of depressed mood two (or more) of the following symptoms must also be reported: changes in appetite, changes in sleep patterns, low energy or fatigue, low self-esteem, poor concentration or difficulty making decisions, feelings of
hopelessness, diminished interest or pleasure in all or most activities, and recurrent thoughts of death.

**Prevalence.** James and Glaze (2006) found that, among prisoners, the most commonly reported symptoms of depression were psychomotor agitation (40%), insomnia or hypersomnia (40%), persistent anger or irritability (38%), anhedonia (35%), feelings of worthlessness or guilt (35%), changes in sexual interest (34%), changes in appetite (32%), and diminished concentration (28%). The least commonly reported depressive symptom was history of suicide attempt (13%). Felson et al. (2012) report that the presence of depression and paranoid thinking among OMI can predict verbally and physically aggressive prison misconduct.

**Consequences.** Incarceration, associated with a 45 percent increase in the odds of experiencing lifetime major depression, more than doubles the odds of developing a 12-month dysthymic disorder (Schnittker et al., 2012). People with a major depressive disorder are more prone to experiencing moral emotions related to self-blame, such as guilt and shame, and may make decisions that increase interpersonal relationship barriers (Pulcu, Zahn, & Elliott, 2013). They are also more likely to have a negative self-concept and have a tendency to ruminate about the causes of their circumstances (Orth, Berking, & Burkhardt, 2006). Kim, Thibodeau, and Jorgensen (2011) report the results of a meta-analysis of 108 studies and 22,411 participants show that shame is associated with depressive symptoms ($r = .43$), contextual-maladaptive guilt (exaggerated responsibility for uncontrollable events, $r = .39$), and generalized guilt (a general sense of guilt disassociated from specific events, $r = .42$).

**Suicide and self-harm.** The most concerning symptoms of depressed mood are suicide attempts and deliberate self-harm due to the potential for lethality. Thirteen percent of state prisoners have attempted suicide at least once in their lifetime (James & Glaze, 2006). OMI are
statistically more likely to kill themselves, both in prison and post-release, than the general population (Fazel, Grann, Kling, & Hawton, 2011). Deliberate self-harm, with and without suicidal intent, is found more commonly in prisoners than in the general population.

**Risk factors.** The literature on suicide and self-harm risk among prisoners is sparse. The highest risk times for a suicide attempt by a prisoner appears to be immediately following arrest, after a court hearing, while serving an extended sentence, and immediately following discharge (Felthous, 2011; Haglund et al., 2014). Several, often overlapping, risk factors for suicide exist among prisoners. Suicide risk factors specific to correctional settings include feelings of guilt or shame related to crime, an external locus of control (learned helplessness, feelings of entrapment and defeat, low resilience), medication-related problems (e.g., poor access to psychotropic medications), impulsivity acute environmental stressors (moves within the prison, activity-related difficulties, isolation), lifetime trauma exposure, prior incarceration, violent crime, and the use of avoidant-coping strategies (Blaauw, Arensman, Kraaij, Winkel, & Bout, 2002; Slade, Edelmann, Worrall, & Bray, 2014; Suto & Arnaut, 2010). A sense of hopelessness increases the risk that a prisoner with symptoms of mental illness will harm or kill themselves (Gooding et al., 2015; Palmer & Connelly, 2005).

**Posttraumatic Stress Disorder and Trauma**

Trauma exposure is a near universal experience among OMI (Wolff, Huening, Shi, & Frueh, 2014). Trauma exposure can come from a number of sources, including as both a victim and a perpetrator of crime. Male prisoners report their top three traumas as witnessing death or serious injury, physical assault, and childhood sexual abuse (N. A. Miller & Najavits, 2012). Victims of violence often present with dissociation, substance abuse, depression, and PTSD (Ardino, 2012). Trauma sequelae include elevated suicide risk, psychosis, and sleep problems.
Frequency of PTSD symptoms was greater in those offenders who later felt regret for their actions (Gray et al., 2003); Crisford, Dare, and Evangeli (2008) found a relationship between higher levels of trauma symptomatology and higher levels of guilty thoughts in OMI.

**Diagnostic criteria.** The *DSM-5* (American Psychiatric Association, 2013) defines Posttraumatic Stress Disorder (PTSD) using eight criteria. First, there is exposure to a specific traumatic event either directly experienced or witnessed, or indirectly through repeated exposure to stories about close relatives, friends, or colleagues. Second, the traumatic event is persistently re-experienced psychologically or physiologically. Third, the person avoids affective, behavioral, and cognitive stimuli associated with the trauma. Fourth, the person experiences negative alterations in negative cognitions and mood to include inability to recall the traumatic event, persistent thinking errors and negative cognitions about oneself or the world, distorted blame surrounding the cause of the event or its consequences, persistent negative emotions related to the event, loss of interest in significant activities, alienation from others, and an inability to experience positive emotions. Fifth, the person experiences alterations in arousal and reactivity (e.g., difficulty falling or staying asleep, irritability or outbursts of anger, difficulty concentrating, hypervigilance, and exaggerated startle response). Sixth, these symptoms are present for more than one month. Seventh, the person experiences a significant functional impairment or distress. Eighth, these symptoms cannot be explained by another illness, substance use, or medication side effects. Symptoms may include a feeling of detachment from self (depersonalization) or reality (derealization). Finally, there is no specific time frame for the development of PTSD as some persons become symptomatic immediately following the event while others may not express a full range of symptoms until some later time. J. G. Beck et al.
(2011) support the conceptualization of shame, guilt distress, and guilt cognitions as relevant features of PTSD.

**Prevalence rates.** Trauma exposure and symptoms of Posttraumatic Stress Disorder (PTSD) among male state prisoners are underreported in the research literature (Wolff et al., 2014). Greater than half of all male prisoners have a lifetime experience with physical, sexual, or emotional abuse and as many as 92% have been exposed to a traumatic event (Wolff et al., 2014). Of male OMI who had ever been treated for a mental disorder ($n = 299$), 97% had experienced direct physical violence and 77% reported moderate to severe symptoms of PTSD. Of the 35% who reported exposure to direct sexual violence, 79% reported moderate to severe PTSD. Among those exposed to sexual violence, 99% reported exposure to some other shocking event; and 76% of those persons reported moderate to severe PTSD symptoms (Wolff et al., 2014).

Prevalence rates of current and lifetime PTSD are significantly higher for prisoners than are the rates found in the community (Ardino, 2012; Drapalski et al., 2009; Neller, Denney, Pietz, & Thomlinson, 2006; Wolff et al., 2014). In a study of OMI, 33% met diagnostic criteria for PTSD and 54% had significant PTSD symptomatology (Gray et al., 2003) with even higher rates in OMI that committed homicide (Papanastassiou, Waldron, Boyle, & Chesterman, 2004). Lifetime rates of trauma and PTSD are associated with psychiatric disorders, suicidal behavioral, substance use disorders, and criminal recidivism (Ardino, 2012; Blauuw et al., 2002).

**PTSD related to crime.** Both trauma exposure and PTSD are strongly associated with substance abuse, violent crime and increased risk of involvement in the criminal justice system (Ardino, 2012; Donley et al., 2012; N. A. Miller & Najavits, 2012). Exposure to trauma, especially childhood physical and sexual abuse, is associated with physical aggression, hostility,
and substance abuse consequences, like incarceration (Bevilacqua et al., 2012; Neller et al., 2006; Swogger, Conner, Walsh, & Maisto, 2011). In particular, the presence of severe PTSD hyperarousal symptoms is a predictor of aggression (Barrett, Mills, & Teesson, 2011).

Self-Esteem

Self-esteem, and its relationship with antisocial behavior, is one of the most researched topics in the literature about understanding the psychological underpinnings of crime and rehabilitation. A June 23, 2015 Google Scholar search for the term “self-esteem” returned about 1,340,000 results. Limiting the search to the terms “self-esteem crime” returned about 177,000 results. Self-esteem, though, remains a poorly defined measure of psychological well-being. There are more than 200 hundred self-esteem scales in use by researchers (Scheff, Retzinger, & Ryan, 1989). In recent years, this lack of clarity has led researchers to continue to investigate the link between self-esteem and crime as well as to deconstruct self-esteem in search of other concepts with greater explanatory power. A partial listing of the components of self-esteem under consideration by researchers contains psychopathy, narcissism, self-control, shame, guilt and self-compassion.

Self-esteem defined. The construct of self-esteem was first proposed by the psychologist William James in 1890 and further developed by sociologist Charles Horton Cooley in 1902. Cooley developed the idea of the *looking glass self*, noting that our self-perceptions are often based in our fantasies about others’ perceptions of us; Harris (1999) upheld this idea one hundred years later (Neff, 2011). Self-esteem, though, may be more complicated than how an individual interprets external social cues of varying clarity and relevance. It may be a construct reflective of one’s sense of worth combined with a belief about one’s capacity to function in society (Asencio, 2013). Where high self-esteem is based on feelings of pride in one’s
accomplishments, low self-esteem is associated with feelings of shame and the avoidance of shame (Scheff et al., 1989). Such a definition no longer measures the quantity of self-esteem held by an individual, but recognizes a series of continuua associated with any variety of personal characteristics. An individual’s composite self-esteem may be composed of how one feels about their accomplishments in each of the arenas of society, vocation, love, spirituality, and cultural ideals/privilege. A factorial analysis of the Rosenberg Self-Esteem Scale (RSES) seems to support this idea as the instrument’s negative self-esteem and positive self-esteem subscales were found to measure separate constructs (Boduszek, Hyland, Dhingra, & Mallett, 2013).

**Self-esteem and crime.** The empirical research and theoretical underpinnings between self-esteem, self-control and violent crime are poorly understood by researchers and debated in the literature (Ostrowsky, 2010; Scheff et al., 1989; Woessner & Schneider, 2013). Three competing perspectives are currently under consideration: First, low self-esteem leads to violent behavior; second, violent behavior stems from high self-esteem; and third, narcissism, which is generally associated with high rather than low self-esteem, contributes to violent behavior (Ostrowsky, 2010). Confusingly, both high self-esteem and low self-esteem have been linked to crimes against persons. Garofalo, Holden, Zeigler-Hill, and Velotti (2015) found the level of awareness for and understanding of emotions, acceptance of emotional responses, engagement in goal-directed behavior, ability to abstain from impulsive behavior while experiencing emotional distress, and access to effective emotion regulation strategies may be an effective moderator between self-esteem and aggression among prisoners. While the utility of self-esteem as a predictor of criminal behavior has been upheld (Boduszek et al., 2013; Ostrowsky, 2010), additional research is required to understand the mechanisms through which self-esteem and criminal action operate.
An Adjunctive Group Counseling Program

This study proposes an adjunctive group counseling program as a complement to the typical correctional mental health treatment system, where it will fit into the extant service gap between psychopharmacology and discharge planning (Brandt, 2012; Lovell et al., 2002). Correctional treatment for mental illness is an opportunity for counselors to reduce the impact of mental illness on OMI within their immediate environment while preparing OMI for life post-discharge.

There are three levels of interest related to correctional treatment outcomes. The immediate interest level is concerned with the management of mental health symptoms and security of the facility: institutional adjustment. At the second level, interest is turned to reduction in the greatest risk factors for future criminal actions. The third interest level is how to promote a complete cessation of criminal action.

Psychopharmacology is the primary treatment approach for the management of mental illness in prison. There is no other known evidence-based model that is used by correctional treatment providers to meet the immediate treatment needs of OMI.

The psychology of criminal conduct (Andrews & Bonta, 2010) is a research-based approach to understanding offenders and what is effective in recidivism reduction. The Risk-Need-Responsivity (R-N-R) model is the centerpiece of the psychology of criminal conduct and is widely discussed in the research literature on prisoner rehabilitation (Morgan et al., 2012; Robinson, Priede, Farrall, Shapland, & McNeill, 2013; Taxman, Pattavina, Caudy, Byrne, & Durso, 2013). The psychology of criminal conduct provides guidance for treatment programming focused on short-term recidivism reduction.
A long term goal of prisoner rehabilitation is stopping criminal behavior entirely (Kifer, Hemmens, & Stohr, 2003). Desistance theory is a sociological approach to determining the factors related to why criminals stop offending. Paternoster and Bushway’s (2009) theory of cognitive transformation focuses on the process of identity development and how a criminal actor’s self-concept changes to support a prosocial identity.

This section will review the research about the components of an effective treatment program for OMI. A brief theoretical review will be followed by a discussion of the specific literature on effective treatment program components for OMI. Finally, there will be review of extant correctional treatment programs.

**Psychology of Criminal Conduct**

**Risk-Need-Responsivity Model**

The Risk-Need-Responsivity (R-N-R) (Andrews, Bonta, & Hoge, 1990) approach is a research-based theory developed to guide correctional interventions designed to reduce criminal recidivism. This approach, widely used in offender assessment and treatment, refers to targeting the most intensive services to those with the highest *risk* of recidivism, treating criminogenic *need* with cognitive-behavioral interventions tailored to the specific needs of the offender (*responsivity*). R-N-R developed from the treatment classification literature begun by Lee Sechrest, Ted Palmer, and others in the 1960s and 1970s as well as from the service research literature suggesting that offenders should be linked to appropriate services based on individual psychological and social needs (Taxman, Thanner, & Weisburd, 2006).

**Central Eight and the Big Four.** In their psychology of criminal conduct, Andrews and Bonta (2010) present eight risk factors associated with criminal recidivism. These static and dynamic predictors, or risk factors, were identified in the correctional rehabilitation literature and
are associated with criminal activity. The dynamic risk factors are called criminogenic needs; need is a term in the correctional literature used to indicate “problematic circumstances” (Andrews & Bonta, 2010, p. 21). The Central Eight criminogenic needs include the Big Four (history of antisocial behavior, antisocial personality pattern, antisocial cognition, or, criminal thinking, and antisocial associates) and the Moderate Four (family circumstances, school or work, leisure and recreation, and current substance use). The Big Four predict 25% of crime (Andrews & Bonta, 2010). The Moderate Four may, in some cases, be protective factors against antisocial action. Appropriate treatment for OMI is designed to respond to criminogenic need (Andrews, Zinger, et al., 1990).

**Treating the Central Eight.** Addressing the central eight criminogenic risk factors in the treatment of OMI is critical if a counseling program is to be effective to reduce recidivism and promote desistance of criminal behaviors (Andrews & Bonta, 2010; Morgan et al., 2012). Of the Central Eight risk factors, only a history of antisocial behavior is unchangeable. Using appropriate treatments, providers can assist OMI to moderate ineffective personality patterns, modify criminal thinking, develop networks of prosocial associates, enhance communication skills, cultivate vocational and leisure activities, and manage addictive behaviors.

**Desistance Theory**

The psychology of criminal conduct informs our understanding of effective treatments for reducing the short-term recidivism risk of OMI. Long-term behavior change processes, including interventions related to the cessation of crime among OMI, remains elusive (Skeem, Polaschek, & Manchak, 2009). Desistance theory provides insights from a century of research into the factors related to when criminals stop offending (see McNeill, Farrall, Lightowler, & Maruna, 2012 for a full discussion of this history). Desistance theory is a product of sociology,
behavioral economics, and social psychology that is concerned with the long-term abstinence from criminal behavior by those with a long term pattern of offending (McNeill et al., 2012; Paternoster & Bushway, 2009). Desistance theory is concerned with the processes and systems that lead people to reduce the practice of antisocial behaviors and to increase their practice of prosocial behaviors, eventually ceasing engagement in behaviors that bring them into contact with law enforcement.

Identity Change

Among desistance theorists, the currently dominate theory of social control (Laub & Sampson, 1993) supposes that criminal activity is a function of an individual's relationship with society; the greater the emotional attachment to society the greater the commitment to socially acceptable means of supporting social goals. Social control advocates describe the key component of criminal desistance as intentional self-change from a criminal identity to a prosocial identity (Bushway & Paternoster, 2013; Kiecolt, 1994). The change process where individuals confront personal discontent with their lives and, in response, develop an alternative possible self-identity occurs through environmental reinforcements as the current working self develops into the behavioral expression of the possible future self (Paternoster & Bushway, 2009). Agency is expressed through intentional self-change from one’s working self toward a possible self.

Role of self-concept. The working self is the person's affects, thoughts, and behaviors as they are expressed in the here-and-now. A possible self is a future-oriented conception of “goals, aspirations, anxieties, and fears that the individual has as to what he or she could become” and provides an alternative identity that directs behavior change (Bushway & Paternoster, 2013).
Treatments that Promote Desistance

Several themes for a desistance promoting treatment approach have emerged from the literature: (a) Desistance from persisting offending is a process that involves relapse; (b) desistance is an individualized and subjective process; (c) support persons and treatment providers, including members of the criminal justice profession, must work to maintain motivation and hope in desisters; (d) relationships between offenders and their supporters is very important; (e) a strengths-based approach is necessary; (f) treatment interventions are most effective when they respect self-determination; (g) opportunities to apply and practice skills associated with alternative identities is required; and (h) labeling people according to their positive potential is important (McNeill et al., 2012).

Specific Elements of Effective Treatment for OMI

Based on their research with therapists working in correctional settings, Winterowd, Morgan, and Ferrell (2001) propose eight general goals that are appropriate for treatment groups with OMI. The first of these goals is the creation of a supportive group environment conducive for self-exploration and learning. A supportive group environment was found to provide an opportunity for the practice and acquisition of coping skills. Second, treatment groups can provide an environment for the development of interpersonal relationship building skills. The third goal of a treatment group for OMI is reduction in substance use by participants. A fourth treatment goal is the improvement of social skills (e.g., impulse control and conflict resolution) and increased self-esteem. A fifth goal, conformity, is related to increases in rule compliance. The sixth goal is the promotion of prosocial behaviors related to recidivism reduction and reduced criminal thinking. Seventh, lifestyle modifications, is related to practical aspects of employment, stress management, and healthy leisure activities. The eighth goal for treatment
groups for OMI is increased institutional adjustment and helping participants make meaning out of their prison experience while coping with the daily stressors of life behind bars.

**Ineffective Treatment Approaches**

In addition to examining what to include in an effective correctional treatment program, research also indicates several ineffective treatment program components. These include: (a) unstructured process-oriented interventions, (b) a focus on cultural understanding and raising participants’ self-esteem, (c) a lack of realistic linkage to school or employment achievement, seeking moral development for its own sake, (d) focusing on affective domains without clear linkage with criminal conduct, increasing cohesiveness of antisocial peer groups, and (e) increasing conventional ambition (Andrews, Zinger, et al., 1990). In short, programming goals of trying to make the offender a *better person* when the standards for being a *better person* do not link with recidivism do little to meet the needs of participants or society (Gendreau, 1996; Lipsey & Cullen, 2007; Morgan et al., 2012).

**Effective Treatments**

An effective model for treatment of mental illness and criminogenic behavior patterns includes several elements. First, assessment of an inmate’s risk for continued criminal behavior and their criminogenic need should determine what programming that inmate receives (Andrews et al., 1990). Second, ignoring either the role of mental illness or the criminogenic factors present in the lives of OMI is incomplete, even naïve, as it is becoming clear that OMI both engage in criminogenic behaviors and have symptoms of mental illness; and, therefore mental illness and criminogenic need should be treated as co-occurring disorders (Andrews & Bonta, 2010; Morgan et al., 2012). Third, interventions should be structured and intensive. These interventions should include cognitive-behavioral treatments that use modeling, scaffolded
practice, rehearsal, role-play, reinforcement, detailed guidance and practical explanations work best (Andrews, Zinger, et al., 1990; Meichenbaum, 2008; Morgan et al., 2012). Interventions with a behavioral component and a focus on changing criminogenic needs produced the greatest effects (French & Gendreau, 2006). Fourth, an effective treatment model must include active, guided practice in the environment where participants live. Skill acquisition occurs through the mechanisms of active practice and reflection (Meichenbaum, 2008). Active homework promotes participant learning by extending learning opportunities beyond the limited time available for in-session practice and reflection (Andrews & associates, 1990; Morgan et al., 2012). Fifth, programming should be in place long enough to effect change. For behavioral and identity change to take place, participants must engage in an intentional process of self-change toward a prosocial identity (Morgan et al., 2012). Sixth, the personal relationship between participants and providers matters. Providers who exhibit a firm but fair approach, eschew exploitation and domination, and build relationships with OMI are able to model a prosocial attitude that influences outcomes (Andrews, Zinger, et al., 1990; Landenberger & Lipsey, 2005; Loeffler, Prelog, Unnithan, & Pogrebin, 2010; Morgan et al., 2012). Seventh, substance abuse treatment is necessary (Taxman, Pattavina, & Caudy, 2014). Finally, while swiftness and/or certainty of response are effective behavior change policies, incentives work better than punishment (Morgan et al., 2012).

**Research support.** Morgan and associates (2012) performed a meta-analysis on a sample (n = 26) of English language studies of interventions with OMI in the correctional treatment literature that used a control group or a repeated measures design and reported enough data to calculate effect sizes. Several important trends for program development were discovered. First, treatment is effective. Fifteen studies reporting mental health outcomes
exhibited a strong positive treatment effect ($ES = .87$). Second, coping skills can be transmitted to OMI. Of the six studies where coping skill acquisition was measured a very strong positive treatment effect ($ES = 1.32$) was found. Third, institutional adjustment may be enhanced. Six studies reporting effect sizes for institutional adjustment a moderate positive treatment effect ($ES = .57$) was found. Institutional adjustment is the extent to which OMI conform to institutional rules and norms. Fourth, the effect of treatment on psychiatric and criminal recidivism is inconclusive. Three studies that investigated psychiatric recidivism (post-discharge placement in a psychiatric hospital) reported an effect size of .42 four studies investigating criminal recidivism (rearrest), reported an effect size of .11. The study also supported an open group admission policy, a behavioral practice component, and the use of active homework assignments to reinforce program lessons. Morgan and associates (2012) support the idea that criminal thinking and mental illness should be co-treated. In their analysis, only one included study treated both issues, and while the results were positive, additional research is required before any generalizations can be promoted.

In a meta-analytic study to determine which moderator variables mediated program effectiveness, Landenberger and Lipsey (2005) examined research studies where offenders were provided with a cognitive-behavioral treatment. The researchers were able to compare several commercial manualized programs with informal and research/demonstration programs. A primary finding is that no one commercial program is better than another; the type of CBT program employed is less important than the training and experience of the provider. The study highlights a few considerations for practice and research. First, consistent with Andrews and Bonta’s (2010) Risk-Need-Responsivity (R-N-R) principles, OMI at high-risk for recidivism do benefit from treatment. Second, the amount of time OMI spend in treatment is important. Third,
the quality of the program (e.g., attrition rate, training of providers, group size, model fidelity) is related to the odds of recidivism. Fourth, the program components most related to success are interpersonal problem solving, cognitive restructuring, anger control, and individual attention outside group; victim impact and behavior modification interventions appeared to increase recidivism.

**Cognitive-Behavioral Therapies Defined**

Cognitive-behavioral therapies (CBT) have been shown to be effective with OMI, increasing the odds of desistance from criminal behavior by as much as 55% versus control groups (French & Gendreau, 2006; Landenberger & Lipsey, 2005; Loeffer et al., 2010). CBT includes a wide variety of clinical interventions that assume maladaptive thoughts contribute to emotional distress and behavioral problems (D. B. Wilson, Bouffard, & Mackenzie, 2005). To improve symptoms of psychological functioning and promote symptom remission clients and clinician work collaboratively to challenge the validity of maladaptive cognitions (such as, irrational beliefs, distorted thinking) and modify maladaptive behavior patterns and encourages prosocial behaviors. In a recent review of 106 meta-analyses examining CBT as a treatment for a wide variety of problems and clients, CBT was found to be most effective as a treatment for anxiety disorders, somatoform disorders, bulimia, anger control problems, and general stress (S. G. Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012).

**Evidence-Supported Cognitive-Behavioral Treatments for OMI**

Cognitive-behavioral therapies (CBT) used with offenders often fall into three categories. Cognitive-restructuring programs focus on the improvement of cognitive distortions, flawed logic, and unrealistic social expectations. Coping-skill development therapies focus on the acquisition of techniques for stress management. Problem-solving therapies approach treatment
behaviorally and teach new ways to act in social situations. Each variety of CBT attempts to transfer skills to correctional program participants that will remedy either a cognitive deficit or a distortion that is creating barriers to prosocial functioning (Wilson et al., 2005). Several commercial evidence-supported interventions are available to meet the general treatment needs of prisoners. Two well-known, and the most researched (Wilson et al., 2005), commercial interventions are Moral Reconation Therapy (MRT) and Reasoning and Rehabilitation (R & R). A third program, The Good Lives Model (Ward & Stewart, 2003) is based on Risk-Need-Responsivity (Andrews & Bonta, 2010) principles.

**Moral Reconation Therapy**

Moral reconation therapy (Little & Robinson, 1990) was developed to provide behavioral, social, and moral education to the general offender population. The company’s website presents the following basic treatment issues as core to the MRT program:

1) confrontation of beliefs, attitudes and behaviors, 2) assessment of current relationships, 3) reinforcement of positive behavior and habits, 4) positive identity formation, 5) enhancement of self-concept, 6) decrease in hedonism and development of frustration tolerance, and 7) development of higher stages of moral reasoning. (Correctional Counseling, Inc., 2015)

A recent meta-analysis of 33 research evaluations found that MRT is associated with (r = 0.16) reduced criminal behavior by adult and juvenile offenders (Ferguson & Wormith, 2013). MRT program materials are available for purchase only by trained providers; the 32-hour training costs around $600 per participant.
Reasoning and Rehabilitation

The Reasoning & Rehabilitation program (Ross, Fabiano, & Ewles, 1988) was developed as an intervention for youths or adults who are evidencing antisocial behaviors or delinquent or criminal behavior (Ross, Fabiano & Ross, n.d.). R & R includes nine program components delivered in 35 manualized 2-hr sessions. The nine modules are self-control, meta-cognition, critical reasoning, social skills, interpersonal cognitive problem-solving skills, creative thinking, social perspective-taking, values enhancement, and emotional management (Ross et al., n.d.). Effectiveness research of the R & R program determined a 14% decrease in recidivism among participants of 19 international evaluation studies (Tong & Farrington, 2008). R & R program materials are available for purchase only by trained providers; the training costs several hundred dollars per participant.

Limitations of MRT and R&R

Several limitations of programs reviewed can be seen quickly. First, while both MRT and R & R can be effective at reducing recidivism among the general offender population newer research shows less effectiveness than earlier studies (Ferguson & Wormith, 2013; Tong & Farrington, 2008). Second, neither program was designed for the OMI population. Third, the initial and maintenance costs of using either MRT or R & R can be prohibitive for cash-strapped correctional systems. Both programs require upfront training for psychoeducational group teachers, participant manuals, and ongoing training for both new teachers and continuing education for veteran teachers.

Good Lives Model

The Good Lives Model (GLM), first proposed by Ward and Stewart (2003) for use with sexual offenders, is a strengths-based approach to offender treatment that is designed to promote
criminal desistance. The model adds to an R-N-R foundation by switching treatment providers’ focus away from risk reduction technologies (avoidance strategies) and toward the development of offenders’ intrinsic motivation to live a self-interested (good) life (approach strategies). The GLM recognizes that OMI, as all do people, have the desire, capacity, and agency to live in their own best interest. The model views criminal behavior as a result of a lack of internal or external resources that the offender can use in the achievement of a good life. Treatment focuses on the development of a value-based life goal plan and the acquisition of the skills to achieve that plan (Ward & Fortune, 2013).

Early research by the GLM’s developer and his colleagues seems to suggests that the GLM may enhance the efficacy of programs that adhere to the Risk, Need, and Responsivity (R-N-R) principle by equipping clients with the tools to live personally meaningful and fulfilling lives (Ward & Fortune, 2013; Willis, Ward, & Levenson, 2014). While the GLM approach was no more effective than a traditional relapse prevention approach GLM may be related to a positive, future-focused perspective among participants (Barnett, Manderville-Norden, & Rakestrow, 2014; Harkins, Flak, Beech, & Woodhams, 2012).

**Prison Setting**

The environment and culture of prison must be considered in the development of an effective intervention so that treatment providers are able to successfully enter the milieu. While it is important that professional counselors assess OMI as individuals, counselors must understand the context in which OMI live (Scott, 2009). Additionally, counselors must prove to OMI and staff that treatment will be provided in such a way that the inmate retains responsibility for their criminogenic thoughts and behaviors as they develop new coping skills and alternative ways to see themselves (McKendy, 2006; Wright, 2005).
Prison Culture

To say that prison is a difficult place to live may be an understatement. Some environmental difficulties must be integrated into treatment protocols if OMI are to acquire new coping skills and attitudes. Prison is an invalidating environment characterized by disturbed caring and frequent exposure to traumatic stressors, reinforcement of antisocial behaviors, and the modeling of behavior similar to that seen in distressed and chaotic families (McCann, Ivanoff, Schmidt, & Beach, 2007). Disturbed caring is characterized by harsh and inadequate discipline, limited positive interactions by authority figures, and inadequate supervision (Dimeff, Koerner, & Linehan, 2007). Incarceration has an iatrogenic effect on delusional disorders (Sarlon et al., 2012). Some antisocial behaviors, such as lying, mistrust, and doing your own time—jail slang for maintaining autonomy, and jailing—slang for getting along with peers and staff, may merely reflect adaptation to correctional culture (McCann et al., 2007).

Amidst the mistrust and defensiveness that mark prison culture, prisoners develop emotional armor to shield their vulnerabilities and deter the aggression of their peers. This emotional armor is referred to as an inmate suit in the ARRAY program to acknowledge the voluntary nature of these emotional shields. Amidst the shielded protections of prison, Crewe, Warr, Bennett, and Smith (2013) describe protected spaces of emotional safety within the emotional geography of prison where inmates allow each other to share their emotional vulnerabilities. ARRAY provides group participants with such an emotional safety zone, and teaches participants skills to intentionally expand their intimate relationships.

The ARRAY Program

Because there are few manualized evidence-based programs (EBP) available for use with OMI the pilot Adult Recidivism Reduction Alternatives (ARRAY) integrative group counseling
program was developed specifically for this study. The development of an evidence-based program (EBP) is a resource-intensive project, and it is rare that any one institutional partner will have all the resources necessary for adequate program development (Jacobs, Jones, Gabella, Spring, & Brownson, 2012; Snyder, 2007). Over a period of two years the ARRAY program was developed through a partnership between a university counselor-training program and a regional prison mental health service in the mid-south region of the United States. The program was developed from the literature on correctional psychology and field tested in a prison mental health unit.

**Overview of ARRAY**

The pilot Adult Recidivism Reduction Alternatives (ARRAY) model is a 12-session integrative group counseling program designed by the author, in conjunction with Dr. Richard James’ crisis research team at the University of Memphis’ Department of Counseling, Educational Psychology and Research. ARRAY is a research-based group counseling model that was developed in collaboration with correctional mental health providers, prisoners, and experts in the counseling field specifically to meet the pre-discharge mental health treatment needs of OMI.

ARRAY utilizes choice theory, self-managed behavior plans, and practice using coping and refusal skills in the development of a personal wellness plan to promote criminal and psychiatric desistance. The program seeks to interrupt participants’ destructive behavior patterns and replace them with healthy, prosocial behavior patterns that ease the stress of incarceration and establish a solid foundation for re-entry into the community.

ARRAY teaches participants to map their emotional, behavioral, and cognitive responses to stressful situations onto a 5-Box schematic (see Figure 1). Mapping allows participants to
visualize relationships between experienced distress and behavior while promoting choice in coping responses. The schematic has sections, or boxes, onto which participants map their 1) high-risk situations, 2) distress indicators, and 3) safe and unsafe coping skills. Two boxes are reserved for the specialized coping skills of medication management and addiction management. A final section of the schematic is dedicated to participants’ wellness goals. The model’s architecture produces relevant self-generated maps that OMI can use to make more effective behavioral choices.

Illustrated by the arrows in Figure 1, ARRAY teaches that safe coping skills move participants closer to wellness and further away from high-risk relapse situations. Alternatively, unsafe coping skills move participants closer to high-risk situations and further away from wellness.

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Figure 1. The 5-box model of self-management used by ARRAY participants.
Uniqueness of the Model

Three unique program components separate ARRAY from other group counseling modalities. First, ARRAY begins with participants’ publicly committing to personal treatment goals through the identification of a potential future self that counter-balances their current, working, self-concept. Second, the exercise of actively mapping their cognitive, behavioral, and affective responses to stressful situations onto the 5-box model is a core component of the ARRAY model. Third, ARRAY participants practice new coping skills in their current environment to reinforce program lessons.

Development of the ARRAY Model

Counseling Theory

The ARRAY program is an integrative counseling model that draws from several counseling theories. In this section the counseling theory that underpins the ARRAY model will be explored. The foundational counseling theories underlying the ARRAY model include: cognitive-behavioral therapies, the vulnerability model of mental illness (Zubin & Spring, 1977), the transtheoretical model of change (Prochaska & DiClemente, 1982), motivational interviewing (W. R Miller & Rollnick, 2002), choice theory (Glasser, 1998), and wellness counseling (Myers & Sweeney, 2008).

Cognitive-Behavioral Therapies

Cognitive behavioral therapy (CBT) integrates the work of Aaron Beck (1970) and Albert Ellis (1962) into a theory of psychological dysfunction founded on the idea that how one interprets and reacts to reality may be incongruous with reality, and therefore, can be corrected by learning to view reality more clearly (S. G. Hofmann et al., 2012; R. K. James & Gilliland, 2003). Over the last four decades, CBT has been researched and expanded until it is a
predominate model for understanding and treating mental illness (Gaudiano, 2008). In this section several CBT technologies will be reviewed and discussed as they apply to the ARRAY program. The first CBT application covered will be self-instructional training (Meichenbaum, 1977). Next, relapse prevention (G. A. Marlatt & Donovan, 2005) and Seeking Safety (Najavits, 2002) will be covered.

**Self-Instructional Training**

Self-instructional training is a CBT technology that describes a facilitated process of learning that was originally developed to improve the behavioral functioning of impulsive and hyperactive children (Meichenbaum, 1977). It is a behavioral theory of learning that stresses the roles of modeling and cognition in the transfer of skills from model to learner. In self-instructional training the locus of control in learning shifts from the model to the learner as the student achieves skill mastery and begins to transfer the skill to others. The process has since been applied to a variety of counseling and educational milieux.

**Behavioral learning theory.** Behavioral theories of learning (i.e., classical and operant conditioning) are founded on the idea that people learn to behave in reaction to some external motivator. Bandura’s (1977) social learning theory shifts the learner’s motivation to an internal state by observing that people learn by watching others and by deliberately performing actions. Meichenbaum (1977) goes a step further, describing learning as an intentional transaction between a model (a teacher, mentor, or group leader) and an active learner. After Meichenbaum learners no longer have to fumble around blindly reacting to stimuli, nor do they learn solely by imitation; learners can be trained through a facilitated five step process.

**A process model of learning.** Self-instructional training is a facilitated learning intervention where a model, or teacher, actively transfers skills to active learners. The model
facilitates learning through a process of verbally guiding and coaching the learner through a task while slowly relinquishing responsibility for the task to the learner. This process shifts the source of learning from other-directed to self-directed. The path from other-directed to self-directed has three phases (Meichenbaum & Biemiller, 1998). In the first phase, the learner follows the total direction of the model. In the second phase, the learner accepts responsibility for the task as the model relinquishes responsibility. In the final phase, the learner completely directs the task. The three, progressive, roles of the learner are acquiring skills, consolidating learning, and consulting with others using the skills. The three corresponding roles of the model are: instructing learners, scaffolding lessons, and mentoring participants in skill acquisition.

There are five steps in a self-instructional intervention. First, cognitive modeling, occurs when a teacher demonstrates a skill while talking through the steps out loud. Second, overt external guidance, occurs as the learner performs the skill while the teacher talks through the steps. Third, overt self-guidance, occurs as the learner performs the skill while verbalizing the steps out loud. Fourth, faded overt self-guidance, happens when the learner silently talks themselves through the skill. The fifth and final step, covert self-instruction, occurs as the learner performs the skill while silently talking through the process. After a learner completes the intervention’s fifth step they may either volunteer or be asked to act as a consultant to other learners (Meichenbaum & Biemiller, 1998). The consultant may be said to have achieved skill mastery. Skill mastery is the ability of an actor to independently solve problems or to guide another through the use of a specific skill.

**Relationship with ARRAY.** In the ARRAY program, participants learn to use a specific skillset for mapping cognitions, behaviors, and affects and selecting coping skills in response to relapse risk indicators. The skillset further involves identification of cognitions, behaviors, and
affects, interruption of habitual reactivity to internal and external stimuli, visualization of goals, and selection of coping skills that promote goal attainment. The ARRAY program utilizes self-instructional training in the transfer of skills to group participants. In early sessions, group facilitators provide direct instruction in the program and model the use of skills to participants. As sessions progress, participants begin to take on increasing responsibility in the application of skills by participating in group activities and practicing outside group sessions. Group facilitators scaffold participant learning with direct coaching and supports to allow participants to focus on learning skills with their developmental grasp (Puntambekar, 2009). As participants gain mastery of program skills they may begin to act as peer consultants inside and outside the formal ARRAY group structure.

**Seeking Safety**

Seeking Safety is an evidence-based protocol for the treatment of co-occurring trauma and substance use disorders that has been used with inmates (Zlotnick, Najavits, Rohsenow, & Johnson, 2003). A key component of the Seeking Safety (Najavits, 2002) model is the use of self-compassion by participants as an antidote to shame and self-destructive behaviors. The ARRAY model incorporates the idea of self-compassion as well as the creation of menus of safe and unsafe coping responses that provide response choices from Seeking Safety. Safe coping responses are those that are compassionate to self and others, while also being wellness-oriented in nature. Unsafe coping responses are those that move participants into a higher relapse risk situation or practice self-destructive behaviors.

**Relapse Prevention**

Relapse is a medical term used to denote a return of disease following a period of remission. In the context of ARRAY, relapse is a return to criminal behavior or high-risk
precursor behaviors such as substance use. Relapse prevention is a cognitive-behavioral model of interrupting the psychological processes that lead to relapse that was first outlined in Marlatt (1978) and since incorporated into many treatments for substance use disorders (G. A. Marlatt & Witkiewitz, 2005). The relapse prevention model focuses on providing education about the relapse process, mastering effective coping skills, building individual efficacy for the management of high-risk relapse situations, and creating navigational maps for predictable high-risk situations (Marlatt, & Donovan, 2005). Relapse prevention is integrated into ARRAY through the recognition of high-risk relapse situations and the idea of planning to prevent relapse through the identification of Apparently Irrelevant Decisions (AIDs).

The Stress-Vulnerability Model

The stress-vulnerability model (Zubin & Springs, 1977) is a three factor model that includes acknowledgement of the role of vulnerability, life stressors, and adaptation in the exacerbation and management of the symptoms of mental illness. The vulnerability model states that each of us reacts to life stressors (e.g., relationship breakdown, financial upheaval, graduation from college, a new job, or incarceration) in ways that are partially determined by our genetics and biology and partially determined by our experiences. Therefore, to the extent to which we are able to manage the intensity of our life stressors, we are able to manage our responses to those stressors as they arise. Adaptation, or competency, is the result of learning new coping skills and integrating their use into one’s problem-solving routines. The ARRAY self-management model builds extensively on the idea of acquired competence in vulnerability management and the self-empowerment that arises from successful problem-solving.
Illness Management and Recovery

An important component of the ARRAY program is the idea that persons with mental illness have agency; and, with the support of skills training programs can make positive and intentional change across multiple life dimensions. This idea, known as recovery, (Whitley, Strickler, & Drake, 2012) is foundational in the ARRAY program. The Illness Management and Recovery (IMR), also known as Wellness Management and Recovery, program informed the development of the ARRAY model through the idea that people with mental illness can pursue recovery through education and social support (Mueser & MacKain, 2013). IMR first assists participants to develop a personal recovery definition before providing written and verbal information, symptom management skills, role-playing and modeling, positive and corrective feedback in a supportive environment over the course of 6-12 month program.

Stages of Change Model

The transtheoretical model of change (Prochaska & DiClementi, 1982) is a 5 stage model for the process of change. Change progresses through five stages that include: (a) pre-contemplation, a lack of ownership or recognition of a problem; (b) contemplation, a period of consideration of the need to make a change that is primarily marked by ambivalence toward change; (c) preparation, a short stage during which how to change is determined; (d) action, the performance of a different behavior; and (e) maintenance, a period when new behaviors are practiced and habituated. An additional stage, relapse, is acknowledged as commonly occurring but not required for change to happen. In ARRAY, the stages of change model are used to provide facilitators and participants with perspective about the long-term nature and that relapse can be part of the change process. ARRAY stresses that while relapse may occur, it is also
stressed that relapse is not required. The idea that relapse is not required empowers participants by creating a sense of hope to accompany the agency provided through skill acquisition.

**Motivational Interviewing**

Motivational interviewing is an evidence-supported directive, person-centered style of counseling intervention that can be used to assist participants to resolve ambivalence toward change (W. R. Miller & Rollnick, 2004). While motivational interviewing was developed for use in substance use treatment, it has been found to be effective in a wide variety of settings and populations and has been used with individuals and counseling groups (Romano & Peters, 2015; T. L. Young, 2013). Tools of motivational interviewing include the expectation of ambivalence to change, the decisional balance, and OARS. Expecting participants to have mixed feelings about change removes the need for confrontation by the counselor toward the participant. Instead, the counselor can monitor shifts in the presence of change talk and sustain talk; resistance exists only within the counselor (W. R Miller & Rollnick, 2013). Decisional balance is a tool for examining the risks and rewards of making a change, and of not making that change. Performing a decisional balance can enhance motivation by highlighting reasons a participant may want to make a behavioral change. The acronym OARS is used to denote the basic responding skills of Open-ended questions, Affirmations, Reflections, and Summarizations. Each of these responding skills can be used to build the relationship between the ARRAY facilitator and the participants. They can also be used to move participants from ambivalence to action through amplification of change talk and exploration of the risks and rewards of making a change (Miller & Rollnick, 2002).
Control Theory

Glasser’s (1998) concept of quality world informs the ARRAY program in two ways. First, it is used as a motivational enhancement tool to help participants identify their ideas about their personal reality and the construction of that reality. Second, their quality world is used to define the high and low relapse risk situations the ARRAY program employs as behavioral guideposts.

Glasser (1998) defines quality world as the pictures of people, things, and belief systems each of us developed to explain and give meaning to our chosen reality. We begin to build our quality world with our earliest awareness and we modify our quality world through our lifelong interactions. For Glasser, the most important component of a quality world is the interpersonal relationships that are included and those that are excluded. Quality worlds may expand or retract based upon one’s self-concept. People with healthy self-concepts may expand their quality world to include possibilities and idealized concepts. In line with desistance-promotion, ARRAY participants are encouraged to describe both their current working self, and a potential self.

The ARRAY model encourages participants to consider life in prison as a quality world that they created to protect themselves from the dangers of the real world. One reason OMI commit crimes and repeatedly return to prison is that they use prison as a coping skill to avoid engagement with the discomforts of life on the town (prison slang for life outside prison). Participants are further encouraged to consider their choice of quality world as within their creative control. ARRAY assumes participants can choose to maintain their current working quality world with its known restrictions and discomforts or they can choose to take the risk of creating a new potential quality world. Commonly, OMI have externalized the responsibility for
their being jailed, so the challenge of looking at a life behind bars as a personal lifestyle choice is discomforting for most.

**Wellness Counseling**

A unique feature of ARRAY is the inclusion of a wellness component in a group counseling intervention. This component establishes a way for participants to recognize when their lives are going well and their potential selves are being lived. This feature allows participants to define their change goals positively, and not as reactions to their problems. Participants are ultimately challenged to apply their skills and conceptualizations to the Adlerian essential life tasks of work, friendship, love, coping, and spirituality (Sweeney, 2009). Participants can examine how they distribute their physical and emotional energy. In line with correctional treatment research described above, ARRAY participants are encouraged to develop prosocial means of performing their life tasks. For many OMI, substance use is highly correlated with criminal activity so ARRAY sessions focused on the role of addictive behaviors are integrated into the program.

**Integration of ARRAY into the Setting**

There are several components of the ARRAY model that are tailored specifically to OMI and the prison environment. First, coping skills for OMI must be adjusted from those used in community settings. Coping skills that tap the internal resources of OMI are needed in a treatment program for incarcerated persons. Mindfulness, journaling, drawing, and letter writing are the types of activities geared better for incarcerated persons to distract themselves from the difficult environment. Second, conversations and discussions between ARRAY staff and OMI include a recognition of the cultural components of life inside prison. Third, the ARRAY group operates in an artificial emotional safety zone where participants can intentionally practice
emotional vulnerability as a vehicle for change. When participants enter the group room they are expected to take off their protective emotional gear, something referred to in the ARRAY language as an *inmate suit*, and to assume that, in the group room at least, that everyone is there to help each other. *Jailing* is a slang term for how to get along in prison. Jailing is the accepted interpersonal structure of the facility where inmates form small clusters of associates to protect against predatory behaviors by other inmates and prison staff. By removing their inmate suit and stopping jailing, ARRAY participants become vulnerable and learn how to relate to each other prosocially.

**The ARRAY 5-Box Model of Self-management**

The Adult Recidivism Reduction Alternatives (ARRAY) model is an integrative group counseling protocol designed to transfer self-management knowledge, skills, and attitudes to persons with mental illness that are involved with the criminal justice system (Offenders with Mental Illness, or OMI). ARRAY uses a unique 5-box model (see Figure 1) to provide visual tools participants can use to rapidly analyze their current situation, and response choices, to decrease their chances for psychological and criminal relapse, and to also increase the odds that they will experience a greater sense of subjective well-being. The ARRAY 5-box model of self-management incorporates the stress-vulnerability model identified by Zubin and Springs (1977). The stress-vulnerability model assumes that all persons have internal, and external stressors that, if strong enough, instigate a crisis response. ARRAY teaches participants to manage their stress-vulnerabilities by recognizing which stressors are most closely associated with crisis, their distress symptoms, and their menus of coping skills and to choose prosocial, wellness-based responses.
The Five Boxes

ARRAY focused on participants’ intentional practice of self-examination about how they recognize and respond to a stressful situation. Participants examine their affective, behavioral, and cognitive indicators of distress as well as their available coping responses. The distress indicators are then mapped onto a self-management model that is graphically represented by five separate, but interconnected, sections, or boxes. The five boxes are: high-risk situations, distress symptoms, coping skills, medication use, and use of mood-altering substances. The medication management and relationship with mood-altering substances boxes address participants’ specific treatment concerns and represent specialized coping skills used to maintain treatment gains. A sixth section is used to identify the signs of wellness and those situations representative of low-risk relapse situations. The wellness box positively mirrors the high-risk situations and the distress indicators with low-risk relapse situations and eustress indicators.

Metaphorically, participants are encouraged to view the 5-box model as similar to a traffic signal. The 5-box model of self-management is used by participants to map their indicators and the coping choices available at any specific time. Red lights are indicators of high-risk situations where critical incidents and relapses, crashes, are likely. Yellow lights are warning signs that one is headed into a red light situation and a reminder that one has a choice of how to respond, either by using an unsafe coping skill (e.g., substance use, criminal action, violence/intimidation, non-adherence to medical recommendations) or a safe coping skill (e.g., reaching out for support, using mindfulness techniques, practicing compassionate self-care, refusing to use drugs and alcohol). Green lights are indicators of low-risk situations where relapse is unlikely and wellness is likely. Throughout the program participants practice the identification of their own idiosyncratic yellow lights and adjust their behaviors accordingly,
using safe coping skills. With practice, participants learn to identify layers of red and yellow lights as well as how the layers interact and reinforce each other.

**Red Lights**

In the ARRAY program high-risk relapse situations are those times and places when participants are likely to find themselves thinking, acting, or feeling in ways indicative of criminogenic need and practice. It is noteworthy that high-risk situations may include positive as well as negative circumstances. Having money to burn can be as risky as not having enough money to feed the family. Other examples of high-risk behaviors include the use of criminal thinking patterns, being in locations where substance using associates are likely to be found, and practicing negative self-talk. Red lights and yellow lights are often the same. Being in a high-risk location also indicates that there are alternative choices available. Red lights and high risk situations often represent chronic problem behaviors and life areas that are targeted for change by participants.

Common red lights for incarcerated OMI include negative interactions with peers and staff, disappointments with family members, poverty, boredom, environmental trauma triggers and anxiety-producing events (e.g., fights, sexual situations), and random drug screening. In reality, almost every moment spent in prison is an occasion for a negative interaction with a peer or a staff member. Post-discharge, OMI face many of these same situations without the security of the restricted prison environment; they may also face opportunities to use substances, commit crimes, and to stop taking psychotropic medications without the protective structure of prison routine. Knowledge, skills, and attitudes transfer between the street and the correctional facility so that practice of new skills while incarcerated creates opportunity for skills transfer to post-discharge environments. Stressors are often quickly compounded in the rapid, dynamic world
outside prison; however, in the slowly developing world of prison there is time for participants to analyze stressful situations at a pace conducive to learning.

**Stress vulnerability bucket.** A common red light for OMI is the accumulation of minor and major stressors that were ignored, stuffed down, or otherwise avoided until some crisis forced the participant’s attention to the chaotic mess that they created with their avoidance tactics. A useful visual tool to illustrate the layering effect of stressors is Brabban and Turkington (2014) stress vulnerability bucket. In this technique, participants are instructed to visualize their capacity for stress management as a bucket that they can pick up and carry around. Into this bucket are placed all their worries, responsibilities, and biological processes (e.g., psychoses, mood disorders, physical ailments) that require attention. As the bucket fills, less room is available for daily variations in mood and biological processes or for unexpected events. Without the regulation of stress-reducing activities (coping skills), participants’ buckets continue to fill. The moment that their bucket overflows the participant experiences a crisis, a functional breakdown, and finds themselves is a red light situation or relapse. With this exercise, participants are confronted with choices about how to prioritize what goes in their buckets. Therefore, identification of the people, places, things, and cognitions associated with high-risk relapse situations is imperative to knowing what a red light looks like before crashing into one.

**Yellow Lights**

Key to using the ARRAY model is the ability to recognize affective, behavioral, and cognitive signs of stress. Stress is a biological reaction affecting the array of physical, biological, mental, and interpersonal systems with which people are constantly engaged. *Eustress*, positive, motivating, stress and *distress*, negative, anxiety-causing, stress are two categories of stressors that may be present in any situation. Stress indicators, *yellow lights* in
ARRAY parlance, may be physical, emotional, associational, environmental, or cognitive. Stress indicators often occur in layers and the identification of one yellow light can highlight the same indicator in the coping skill menu as well as the high-risk situation list. For example, it is common for people to ignore the yellow lights of lower back pain, tense shoulders and neck, and jaw tightening until the inevitable stress headache forces a more active coping response. The ultimate goal is for participants to develop the practice of identifying yellow lights. The earlier in the relapse cycle that yellow lights are noticed the greater psychological capacity participants have for symptom management.

Coping Skills

Cognitive and behavioral strategies, commonly known as coping skills, provide individual actors with the means to respond to and soothe their discomfort in the management of affective distress (Lazarus, 1966). Both distress and eustress trigger identical, predictable, and sometimes idiosyncratic, responses in our bodies, minds, and relationships. An individual’s ability to use effective coping skills to manage a stressful situation is the most critical predictor of relapse (G. A. Marlatt & Witkiewitz, 2005). The ARRAY model sorts coping skill options according to how the use of a particular skill moves the user closer to their red or green lights. In ARRAY, there are safe and unsafe coping skills. Rocheleau (2015) identified several effective (eliciting emotional and instrumental support from family, peers, and staff) and ineffective (joking, bravado) coping strategies and their relationship to odds of prison misconduct and violence. There are also two specialized coping skills (addiction management and medical management) that are directly associated with the prevention of behavioral health and criminogenic relapse.
**Safe coping.** ARRAY participants are assisted in the identification of their commonly used coping skills and in the development of additional, wellness-based skills. The notion of safe coping skills is adapted from Najavits (2002), who emphasizes mindfulness and self-compassion in her Seeking Safety program. Safe coping skills are those that help increase the distance between the participant and the nearest red light. They are often simple, prosocial, relational, and immediate—often designed to help the participant navigate the next few minutes—as in the techniques of *urge surfing* (Larimer, Palmer, & Marlatt, 1999) and *opposite action* (Lynch, Chapman, Rosenthal, Kuo, & Linehan, 2006). Urge surfing is the practice of observing that one wants to perform an action (i.e., use alcohol) until the desire crests and crashes under its own weight as a wave on the shore. Opposite action is the practice of coping with a distressful situation by performing the opposite behavior one would normally perform at that time.

Safe coping skills, like the expression of empathy and self-compassion, the act of expressing empathy for oneself, is an important relational skill encouraged by the ARRAY program and developed through modeling and in-session practice. Davis (1983) theorized four aspects of empathy as fantasy (imagining the feelings and actions of fictional characters), perspective-taking (adopting the psychological perspective of others), empathic concern (feelings of concern and sympathy for others), and personal distress (feelings of personal anxiety and unease in stressful situations). Often, the expression of concern for others is not extended to oneself by individual OMI and part of learning to practice safe coping is learning to value one’s self as worthy of compassion and self-care.

**Unsafe coping.** Unsafe coping skills, alternatively, often represent habitual problem behaviors the participant wants to change, they are yellow lights themselves. Unsafe coping
skills tend to be criminogenic and antisocial, and move participants closer to a relapse or other crisis. The lure of unsafe coping skills is the immediacy of relief achieved by their use. When first developed, a person’s unsafe coping skills may have served a practical purpose; however, over time and as individuals’ circumstances change, the usefulness of these behaviors is often greatly degraded while simultaneously continuously deployed to meet current needs. For example, it is common to hear addicts in early recovery talk about the love-hate relationship they have with their drug of choice.

**Specialized coping skills.** The two specialized coping skills of addiction management and medical management are introduced and discussed throughout the ARRAY program. Both specialized skills have their own specific box to highlight their importance to wellness. The first of these specialized coping skills is the participant’s relationship with mood-altering substances and behaviors. The second specialized coping skill addressed in the ARRAY model is that of the participants’ attention to biological vulnerabilities to physical and mental illness. Both specialized skills are recognizable by most participants as the rates of co-occurring addiction and physical illness are high among OMI. Substance use and medication management often offset each other and may not be recognized by participants as problems, either through anosognosia—the impaired awareness of one’s illness—or for protection of a cherished belief.

**Addiction management.** Addiction is the uncontrollable use of a substance, or, as increasingly recognized by addictionologists, a behavior. Substance use, for many people, is a harmless way to reduce tension and cope with distress. However, some people--42% of OMI (James & Glaze, 2006)--are unable to control their use of mood-altering substances and suffer severe negative consequences from use. Therefore, addictive processes are an important topic to
explore with OMI in a treatment program, since it is well substantiated that substance use is the primary risk factor for criminal offending (Wilson et al., 2011).

**Process addictions.** Although controversial, researchers are exploring the role of process addictions in unsafe coping. While outside the scope of this study, it is arguable that criminal behavior, when used for self-soothing, is an addictive behavior. Brain scans of those who engaged in gambling, binge eating, and compulsive sex were similar to the brain scans of substance abusers (A. D. Wilson & Johnson, 2014). Sussman, Lisha, and Griffiths (2011) present a working definition of process addiction as “a series of potentially pathological behaviors that expose individuals to ‘mood-altering events’ by which they achieve pleasure and become dependent” (p. 7). They also identified eleven process addictions (tobacco, alcohol, illicit drugs, eating, gambling, Internet, love, sex, exercise, work, and shopping) in the addiction literature.

**Medical management.** In the ARRAY program, medical management is the second of two specialized coping skills highlighted with its own box in the model. In this way, adherence to medical recommendations for the management of physical and psychiatric health is underlined as a support that participants can use to help their minds and bodies operate at maximum efficiency. There is a recognized link between physical and mental health, as well as a known propensity for humans to resist following medical advice, even when they recognize the helpfulness of that advice (Martin, Williams, Haskard, & DiMatteo, 2005).

Many OMI have co-occurring chronic physical ailments that must be addressed medically simultaneously with their chronic mental illness. Program topics include medication usage, working with medical staff to insure they have the right medicine for the right symptom, how to obtain medications, and working with case managers, physicians’ offices, and pharmacies
to maintain access to prescribed medications. A discussion of strategies to enhance medication adherence as well as alternative treatments and the neurological mechanics of medication use are addressed. Importantly, this box is linked to the addiction management box as participants may have relationships with prescribers and pharmacies, often in multiples, to obtain extraordinary amounts of mood-altering substances. Clinical experience suggests that substance use alters individual medication adherence and that substance use may even reduce the effectiveness of psychotropic medications.

**Choice**

The ARRAY model builds on the assumption that everyone will do something to soothe, or cope with, distress. Therefore, everyone has developed a menu of coping skills from which to select as needed. However, when habitual soothing mechanisms no longer work as intended psychologically healthy individuals choose another option from their skills menu. ARRAY participants are taught to identify when to choose a coping skill from an expanded menu of alternative skills. The encouragement of psychological flexibility and the ability to recognize one’s power to choose how to respond to a situation are ARRAY focal points.

Yellow lights, just as when driving in the city, indicate that a point of decision is imminent. Participants have the choice to ignore the yellow light and risk crashing in the intersection, or, to perform some other, safer, action. Stopping to take a breath, relax, gain perspective, and consider the menu of choices are common cognitive-behavioral techniques that are useful when entering a crossroads or unknown area. During the brief timeout, participants may consider options from their menu of available coping responses.
Green Lights

The green lights of wellness are a unique feature of the ARRAY model. They provide a way to visualize alternatives to the red light symptoms and stressors most comfortable for participants. The green lights are derived directly from individual psychology and the five aspects of wellness (Myers, Sweeney, & Witmer, 2000). The five aspects of wellness identified by these authors in their original Wheel of Wellness model, and later revised as The Indivisible Self model (Myers & Sweeney, 2004), are work, spirit, family, love, and self. ARRAY participants are encouraged to examine how they address each of these aspects in their life. Participants complete worksheets and talk in group about the priority they give to each aspect and how to achieve balance between these aspects. Participants are encouraged to examine their relationship with each of component of a wellness based lifestyle. Using the five aspects of a wellness-based lifestyle participants are encouraged to visualize an alternative lifestyle for themselves.

Creation of the potential self. The ARRAY program uses the green lights individual participants develop for themselves in two inter-related ways. First, examination of their current life balance provides motivation for change. Participants select a lifestyle change goal using a simple technique based in choice theory (Glasser, 1998). This powerful motivational technique asks participants to choose between two options: to change or sustain dysfunctional behavior, and to publically commit to their choice (R. James, personal communication, 15 August 2014).

Second, the creation of an alternative identity provides participants with a potential self they can practice and develop. The potential self is a concept unique to ARRAY. Instructing participants to act differently from how they have acted for much of their life lacks guidance that participants can use to determine progress and measure change. The potential self provides
participants with a way to define for themselves prosocial behavior and to self-monitor and self-correct their identity. It is through this intentional modeling participants are able to change their identities in ways that decrease antisocial behaviors and increase prosocial behaviors (Bushway & Paternoster, 2013).

**Summary**

The research about symptoms and prevalence of mental illness among prisoners is sparse. The only national data on mental illness among prisoners is over ten years old (James & Glaze, 2006). Individual study data is inconsistent in definition of mental illness, time periods when symptoms are present, and even how the data is collected. The research literature about treating mental illness is also sparse and dated. While it is clear the CBT is effective, there is little else known about effective programming (Morgan et al., 2012). The correctional mental health research community is, in many ways, struggling to determine what works to prepare OMI for successful re-integration post-discharge. Critical items like dosage, symptom targets, and lessons to include lack research foundations that can inform the development of an evidence-based program treatment program for OMI. Therefore, this study tests the effectiveness of a group counseling intervention on anxiety, depression, low self-esteem, and PTSD among prisoners in a state prison who have been identified as having a mental illness and being at high-risk for recidivating.

**Methodology**

This study evaluates the capacity of the pilot 12-session Adult Recidivism Reduction Alternatives (ARRAY) group counseling intervention to reduce symptoms of mental illness in adult male prisoners with mental illness (OMI) using a quasi-experimental research design chosen for its fit within the temporal and structural limits of the study setting. To evaluate the
intervention, the group means of study participants' scores on the anxiety, depression, posttraumatic stress disorder (PTSD), and low self-esteem scales of the Emotional Problem Scales – Self Report Inventory (Corrections) (EPS-C; Daigle et al., 2015) were compared at pre- and post-intervention for the experimental group and also against three comparison groups. This chapter includes a description of the research design, instrumentation, study participants, and research procedures used in the proposed study.

**Setting**

The ARRAY pilot study will be conducted at a regional prison in the Mid-South region of the United States where inmates from the local area, as well as some state and federal inmates, are housed. One facility building, the Mental Health Unit (MHU) is designated for OMI, and houses up to 120 inmates in four dormitories. The intervention will be provided in the MHU to increase OMI's access to the service with the least disruption of facility routines; the movement of prisoners between buildings can only be performed according to set procedures and as security staff is available. The prison's director of mental health services, a professional counselor, is housed in the building.

Prison mental health units (MHU) are housing units designed to meet the needs of special inmate populations (D. S. Young, 2003). A segregated mental health unit may have open admissions and discharge policies as OMI are admitted and discharged from the facility.

In the MHU, inmates have access to medical and psychiatric care, case management, and discharge planning services. MHU security staff is dedicated to the unit, which improves the levels of trust inmates have with security, improves the ability of the staff to monitor behavioral indicators of inmate distress and intervene to decrease potential dangerous behaviors, and reduces staff-inmate tension. Specialized programming for prisoners with substance use
disorders, serious and persistent mental illness, and sexual offense charges is available on-site. Daily programming on the MHU is peer-led. Morning community meetings provide inmates opportunity to conduct dorm business, share institutional procedure updates, and collectively negotiate community norms. While some researchers (Kupers, 1999) have noted a warehousing effect in prison, there are a few jobs and activities that inmates can perform within the environment. Prisoners may request job assignments with increasing responsibilities and privileges. Coordinator levels rank from dorm cleaning chores (lowest) to building support activities (highest).

**Study Participants**

There are four participant groups in this study. The ARRAY experimental group is composed of those who completed the intervention program. The MOTIVATED comparison group is composed of those who started, but did not finish, the intervention. The MATCH comparison group is composed of OMI that received treatment as usual and was selected from the EPS-C normative sample. The NORM comparison group is composed of the inmates from the general prison population.

The ARRAY group, the treatment group, is composed of those who responded to the EPS-C at pre-intervention administration, finished the treatment program, and responded to the EPS-C at post-intervention administration. The ARRAY group was broken into two subgroups based upon time of measurement. The ARRAY-Pre group was measured prior to participation in the intervention while the ARRAY-Post group was measured following the intervention. These groups were compared against each other as well as against the other comparison groups. Demographic information for the study participants ($N = 71$) was collected during the study.
The demographics of the ARRAY Pre-intervention sample \( (n = 33) \) are described by gender, sexual orientation, relationship status, ethnicity, age, and educational achievement. The sample includes adult men who identified as heterosexual. The relationship status of the sample is: nine (27.3%) were married, 13 (39.4%) were single, seven (21.2%) were divorced, two (6.1%) were separated, one (3%) was widowed, and one (3%) did not indicate a relationship status. The ethnicity of the sample is: 13 (39.4%) identified as Black or African American and 20 (60.6%) identified as White or European American. The age of the sample is: five (15.2%) are between 18 and 23 years old, four (12.1%) are 24-29 years of age, six (18.2%) are 30-35 years old, six (18.2%) are 36-41 years old, five (15.2%) are 42-47, four (12.1%) are 48-53 years old, two (6.1%) are 54-59 years old, and one (3%) is older than 60 years old. The educational achievement of the sample is: one (3%) is less than eighth grade, four (12.1%) did not graduate high school, 12 (36.4%) earned a general education development certificate, seven (21.2%) earned a high school diploma, five (15.2%) completed some college credits, three (9.1%) earned an associates or technical degree, and one (3%) earned a graduate degree.

The demographics of the ARRAY Post-intervention sample \( (n = 33) \) are described by gender, sexual orientation, relationship status, ethnicity, age, and educational achievement. The sample includes adult men. Thirty-one (93.9%) who identified as heterosexual and two (6.1%) who did not identify a sexual orientation. The relationship status of the sample is: ten (30.3%) were married, 14 (42.4%) were single, five (21.2%) were divorced, two (6.1%) were separated, one (3%) was widowed, and one (3%) did not indicate a relationship status. The ethnicity of the sample is: 12 (36.4%) identified as Black or African American, 20 (60.6%) identified as White or
European American, and one (3%) identified as Multi-Racial. The age of the sample is: three (9.1%) are between 18 and 23 years old, six (18.2%) are 24-29 years of age, five (15.2%) are 30-35 years old, six (18.2%) are 36-41 years old, five (15.2%) are 42-47, five (15.2%) are 48-53 years old, two (6.1%) are 54-59 years old, and one (3%) is older than 60 years old. The educational achievement of the sample is: five (15.2%) did not graduate high school, 10 (30.3%) earned a general education development certificate, six (18.2%) earned a high school diploma, six (18.2%) completed some college credits, five (15.2%) earned an associates or technical degree, and one (3%) earned a graduate degree.

**MATCH**

The MATCH comparison group includes adult male OMI that responded to the EPS-C and received the facility’s usual treatment without exposure to the proposed intervention. The MATCH comparison group was created by the author by hand selecting from the EPS-C normative sample those records of adult men that were coded as having been collected on the prison's mental health unit; a random sample was selected from this group to reduce the sample size to match the sample size of the ARRAY and MOTIVATED samples. The MATCH group differs from the ARRAY and the MOTIVATED groups in that they did not have any exposure to the ARRAY treatment intervention.

The demographics of the MATCH sample \( n = 39 \) are described by gender, sexual orientation, relationship status, ethnicity, age, and educational achievement. The sample includes adult men. The sexual orientation of the sample is: three (7.7%) did not identify a sexual orientation, 35 (89.7%) identified as heterosexual, and one (2.6%) identified as bisexual. The relationship status of the sample is: one (2.6%) did not identify a relationship status, five (12.8%) were married, 25 (64.1%) were single, and eight (20.5%) were divorced. The ethnicity of the
sample is: one (2.6%) identified as American Indian or Alaskan Native, twenty-one (53.8%) identified as Black or African American, one (2.6%) as Native Hawaiian or other Pacific Islander, 14 (35.9%) identified as White or European American, one (2.6%) identified as Multi-Racial, one (2.6%) as Other. The age of the sample is: three (7.7%) are between 18 and 23 years old, six (15.4%) are 24-29 years of age, 11 (28.2%) are 30-35 years old, eight (20.5%) are 36-41 years old, three (7.7%) are 42-47, four (10.3%) are 48-53 years old, one (2.6%) are 54-59 years old, and two (5.1%) is older than 60 years old, while one (2.6%) did not report an age. The reported educational achievement of the sample is: one (26%) less than 4th grade, two (5.1%) less than eighth grade, 13 (33.3%) did not graduate high school, five (12.8%) earned a general education development certificate, five (12.8%) earned a high school diploma, eight (20.5%) completed some college credits, two (5.1%) earned an associates or technical degree, and one (2.6%) earned a bachelor’s degree; two (5.1%) did not report educational achievement.

MOTIVATED

The MOTIVATED comparison group includes those who chose to respond to the EPS-C at pre-test administration, and entered but not finish the treatment intervention or respond to the EPS-C at post-test administration. Reasons participants may have for not finishing the program include voluntary withdrawal from the program, premature discharge from the facility, disciplinary action resulting in movement from the building, and sickness. The MOTIVATED group and the ARRAY group differ in their intervention completion status. The MOTIVATED group is a comparison group for this study.

The demographics of the MOTIVATED sample (n = 38) are described by gender, sexual orientation, relationship status, ethnicity, age, and educational achievement. The sample includes adult men, 37 (97.4%) who identified as heterosexual and one (2.6%) did not report a sexual
orientation. The relationship status of the sample is: six (15.8%) were married, nineteen (50%) were single, eight (21.1%) were divorced, two (5.3%) were separated, two (5.3%) were widowed, and one (2.6%) did not indicate a relationship status. The ethnicity of the sample is: 14 (36.8%) identified as Black or African American, 20 (52.6%) identified as White or European American, and one (2.6%) identified as Multi-Racial, while 3 (7.9%) did not report an ethnic identity. The age of the sample is: three (7.9%) are between 18 and 23 years of age, five (13.2%) are between 24 and 29 years of age, eight (15.8%) are between 30 and 35 years of age, 10 (26.35%) are between 36 and 41 years old, six (15.8%) are between 42 and 47 years of age, two (5.3%) are between 48 and 53 years of age, three (7.9%) are between 54 and 59 years old; while one (2.6%) did not report an age. The educational achievement of the sample is: two (5.3%) have less than an eighth grade education, six (15.8%) did not graduate high school, 15 (39.5%) earned a general education development certificate, seven (18.4%) earned a high school diploma, five (13.2%) completed some college credits, one (2.6%) earned an associates or technical degree, while two (5.3%) did not report educational achievement.

**NORM**

The NORM comparison group is the EPS-C normative group comprised of adults incarcerated in a state prison ($N = 438$). To prevent confounding between comparison groups, NORM subjects identified as having mental illness ($n = 61$) were deselected from this comparison group. The deselected sample was used to construct the MATCH comparison group ($n = 39$). The NORM group did not have exposure to the ARRAY treatment intervention. Their mental health status is unreported. The NORM group was a comparison group for this study.

The demographics of the NORM sample ($n = 376$) are described by gender, sexual orientation, relationship status, ethnicity, age, and educational achievement. The sample includes
281 (74.7%) men and 47 (12.5%) women, as well as 48 (12.8%) who did not report a gender.
204 (54.3%) who identified as heterosexual, two (0.5%) who identified as gay, four (1.1%) who
identified as lesbian, and five (1.3%) who identified as bisexual, while 161 (42.8%) did not
identify a sexual orientation. The relationship status of the sample is: 33 (8.8%) were married,
151 (40.2%) were single, 15 (4%) were divorced, eight (2.1%) were separated, four (1.1%) were
widowed, and 165 (43.9%) did not indicate a relationship status. The ethnicity of the sample is:
three (0.8%) identified as Hispanic/Latino, six (1.6%) identified as American Indian or Alaskan
Native, two (0.5%) identified as Asian, 235 (62.5%) identified as Black or African American, 63
(16.8%) identified as White or European American, 10 (2.7%) identified as Multi-Racial, two
(0.5%) identified as Other; while 55(14.7%) did not report an ethnic identity. The age of the
sample is: 77 (20.5%) are between 18 and 23 years old, 82 (21.8%) are between 24 and 29 years
of age, 65 (17.3%) are between 30 and 35 years old, 43 (11.4%) are between 36 and 41 years old,
32 (8.5%) are between 42 and 47 years old, 14 (3.7%) are between 48 and 53 years old, nine
(2.4%) are 54-59 years old, while 54 (14.4%) did not report an age. The educational
achievement of the sample is: 10 (2.7%) with less than an eighth grade education, 114 (30.3%)
did not finish high school, 75 (19.9%) earned a general education development certificate, 58
(15.4%) earned a high school diploma, 37 (9.8%) completed some college credits, 20 (5.3%)
earned an Associates or technical degree, four (1.1%) earned a bachelor’s degree, one (0.3%)
earned a graduate degree, one (0.3%) earned a PhD or professional degree, while 56 (14.9%) did
not report educational achievement.
Instrumentation

This study employed the Emotional Problem Scales – Self Report Inventory (Corrections) (EPS-C) (Daigle et al., 2015) as a pre- and post- intervention assessment instrument to measure participants’ change as a result of participation in the ARRAY program.

Emotional Problems Scales

The Emotional Problems Scales (EPS) (Prout & Strohmer, 1991) is an instrument that can be used to assess the presence of emotional problems in persons aged over 14 years old with IQ scores ranging from 55 to 83. The EPS was originally developed using a normative sample comprised of persons with intellectual and development disorders receiving professional behavioral health services. The EPS has been used in international research studies with persons with intellectual disabilities to determine the presence of pathology and to determine the risk of misconduct in psychiatric hospitals and correctional facilities (Hogue et al., 2007; Lewis & Morrissey, 2010; Lindsay et al., 2008). It has also been used to determine the presence of emotional problems in persons with Parkinson's disease (Le Roux, 1999).

The EPS is a multi-informant assessment tool which includes both the Self-Report Instrument (SRI) and a clinical Behavior Rating Scale (BRS). The 147-item Self-Report Inventory (SRI) uses a binary answer format for readers above a 3rd-grade reading level. To accommodate the needs of respondents with very low reading levels the instrument is designed to be read aloud and takes about 20 min to complete. The 135-item Behavior Rating Scale (BRS), designed to be completed by a professional caregiver in less than 15 min, uses a Likert-type answer format that can be scored as almost never, rarely, occasionally, or often (Lewis & Morrissey, 2010). Scores from both instruments can be considered independently or jointly according to the needs of the researcher and the restrictions of the study.
**Scales.** Four validity measures: counting unmarked responses, number of yes and no responses, length of continuous yes/no alternating patterns, and number of items in a continuous yes or no response set are also included (Hoy, 1996). The SRI has one validity scale (positive impression) and six clinical scales: thought/behavior disorder, impulse control, anxiety, depression, low self-esteem, and total pathology. The positive impression scale indicates the presence of under- or over-reporting that may affect the other five clinical subscales or the composite scale, total pathology (Hoy, 1996). The BRS has 11 clinical scales: thought/behavior disorder, verbal aggression, physical aggression, sexual maladjustment, noncompliance, hyperactivity, distractibility, anxiety, somatic concerns, withdrawal, depression, and low self-esteem. The scales factor analyze into externalizing behavior problems and internalizing behavior problems. Externalizing behavior problems includes physical aggression, noncompliance, hyperactivity, and verbal aggression. Internalizing behavior problems include anxiety, depression, and self-esteem (Lindsay et al., 2008)

**Validity and reliability.** The validity and reliability of the EPS is reported by Hogue and associates (2007) as excellent. The EPS has been found to be predictive of violent and challenging behaviors, and to have the ability to discriminate between violent at-risk groups (Lindsay et al., 2008; Sondenaa, Rasmussen, & Nottestad, 2008).

**EPS limitations.** The EPS was originally developed using a normative sample comprised of persons with intellectual and development disorders (IDD) who were receiving professional behavioral health services. Published research studies that discuss the EPS have participant populations of persons with IDD in secure forensic settings (Hogue et al., 2007; Lindsay et al., 2008; Lindsay et al., 2010). Hoy's (1996) discussion of the limitations of the EPS focuses on structural problems, most importantly a perception that the EPS views adults with
intellectual disabilities as “merely large children” (p. 307), which potentially discounts the life experiences of some respondents.

**Emotional Problems Scales (Corrections)**

The Emotional Problem Scales – Self Report Inventory (Corrections) (EPS-C; Daigle et al., 2015) is a variant of the original EPS and was designed specifically for use in correctional settings. The EPS-C is a 194-item self-report instrument that utilizes a binary response format that respondents can complete in 30 min. The EPS-C is both an assessment of abnormal personality and of risk for misconduct.

While the instrument’s developmental status limits the strength of the instrument, norming and concurrent validation studies with the MMPI show that the EPS-C is a valid instrument (Daigle, 2014). Clinical cut-off scores are under development (D. Strohmer, personal communication, 9 December 2014), so the instrument cannot yet be used diagnostically. For this study the EPS-C will be used as a pre- and post-intervention assessment of the presence and amount of emotional problems.

**Scales.** The EPS-C has nine rationally developed clinical scales designed to detect the presence of emotional problems in correctional settings and to predict future antisocial behaviors. There is one validity scale (Lie) and eight clinical scales: thought and behavior problems, suicidal ideation, low self-esteem, posttraumatic stress disorder, impulse control, depression, anxiety, and addictive behavior.

**Rationale for Use**

The EPS-C offers a number of advantages for use as a tool to evaluate the effect of the ARRAY program in this study. First, the EPS-C is a variant of the extant Emotional Problems Scales assessment, which is capable of measuring the severity of emotional problems of people
with intellectual and developmental disabilities in correctional settings. Second, the Emotional Problems Scales does have both discriminative and predictive validity for risk of misconduct in forensic settings. The EPS-C is designed specifically for forensic settings. Third, the reading level of the EPS-C is appropriate for prisoners with learning disabilities and low reading levels. Fourth, the EPS-C is a brief self-report instrument that can be efficiently administered. For these reasons, the EPS-C is a good fit for the prison setting of this study. This study utilized the EPS-C clinical scales of anxiety, depression, PTSD, and low self-esteem because these are common emotional problems among prisoners and are targeted for change by the ARRAY program. The EPS-C instrument is included as an Appendix 4.

Research Design

The design of the study is a quantitative quasi-experimental pre- and post-intervention comparison of a group of adult male inmates with mental illness who are resident on the mental health unit of a regional prison in the mid-south section of the United States to determine if there are differences in the dependent variables of anxiety, depression, PTSD, and low self-esteem over time. The intervention group was compared to three rationally created comparison groups to determine if there is a statistical difference in group means across the comparison groups.

Rationale for Design

This design was selected for its efficiency, flexibility, and goodness of fit with the available time-frame and study setting. The design also provides a practical fit consistent with ethical service delivery. In prison there are spatial and temporal limitations for the researchers to access OMI due to institutional processes and security concerns. The ARRAY intervention is designed to be delivered in one 15-week academic term, a pre- and post-intervention design can be efficiently implemented within the available timeframe. The quasi-experimental design was
chosen to fit within the structure of the correctional setting. In this setting, participants live together in a secure unit. All participants are volunteers recruited from the housing unit and randomization of the sample is impractical due to the physical limits of the facility.

**Independent Variables**

The independent variables for this study are the experimental group (ARRAY), and three comparison groups (MOTIVATED, MATCH, and NORM). The ARRAY group was divided into the ARRAY-Pre and ARRAY-Post groups for comparison at pre- and post-intervention.

**Dependent Variables**

The dependent variables for this study are the group means for the EPS-C Anxiety, Depression, Posttraumatic stress disorder (PTSD), and Low Self-Esteem scales for each of the five comparison groups: ARRAY-Pre-, ARRAY-Post-, MATCH, MOTIVATED, and NORM.

**Demographic Variables**

The demographic indicators of each comparison sample include race, ethnic background, sexual orientation, affectual partner status, age, and educational achievement.

**Statistical Analysis**

Each question was analyzed in two ways. First what are the relationships between each of the comparison groups, and did ARRAY participation effect those relationships? A one-way ANOVA ($\alpha = .05$) was computed to compare each of the comparison groups, first at pre-intervention and then at post-intervention, on each scale. ANOVA is a general linear model statistical tool, often used to quantify the strength of the relationship between one independent variable, with two or more levels, and one or more dependent variables.

Second, what were the relationships between the pre- and post-intervention scores? A repeated measures dependent samples $t$-test was conducted to compare the before and after group...
means for each scale. *T*-tests are a statistical tool to assess whether the group means of the pre-intervention scores are statistically different from the group means of the post-intervention scores on each of the four EPS-C scales considered in this study. Reductions in the mean scores for any scale indicates improvement and lower levels of the emotional problem measured by the EPS-C scale. Changes in the group means are presumed to result from changes in the independent variable (Hinkle, Wiersma, & Jurs, 2003).

**Research Questions**

This study evaluated the Adult Recidivism Reduction Alternative (ARRAY) program, a research-based integrative group counseling intervention, with adult men with mental illness who are incarcerated in a state prison using the anxiety, depression, posttraumatic stress disorder, and low self-esteem scales of the Emotional Problem Scales – Self Report Inventory (Corrections) (EPS-C; Daigle et al., 2015).

The general research question answered by this study is whether there are differences in the group means of the pre- and post-intervention scores on the EPS-C anxiety, depression, PTSD, and low self-esteem scales for the ARRAY intervention group compared to a motivated OMI (MOTIVATED) control group, a matched OMI (MATCH) control group, and a general inmate population control group (NORM).

From this general research question, the following specific questions follow:

**Question 1: Anxiety**

Are there differences between pre- and post-intervention scores on the EPS-C anxiety scale for the ARRAY experimental group compared to the MOTIVATED, MATCH, and NORM control groups?
Question 2: Depression

Are there differences between pre- and post-intervention scores on the EPS-C depression scale for the ARRAY experimental group compared to the MOTIVATED, MATCH, and NORM control groups?

Question 3: PTSD

Are there differences between pre- and post-intervention scores on the EPS-C PTSD scale for the ARRAY experimental group compared to the MOTIVATED, MATCH, and NORM control groups?

Question 4: Low Self-esteem

Are there differences between pre- and post-intervention scores on the EPS-C low self-esteem scale for the ARRAY experimental group compared to the MOTIVATED, MATCH, and NORM control groups?

Procedure

IRB Approval

This study does have approval from The University of Memphis Institutional Review Board (IRB# 3171) (Appendix 1) and the Shelby County Department of Corrections (Appendix 2).

Recruitment

At the initiation of the study the principal investigator and members of the crisis research team visited each dorm in the SCDOC mental health unit (MHU) during the inmate’s morning community meeting. During the visit, the program was introduced to potential participants, who were given an opportunity to ask questions about the program. Inmates who were interested in learning more about the proposed study signed up for individual interview sessions with the
principal investigator. The agenda for individual interview sessions included a structured assessment (Appendix 3) and brief discussion of the program goals and expectations. The purpose of the screening interview was to determine if potential participants meet the inclusionary criteria for participation and that there is a good fit between the participant and the group. Potential participants, who met the inclusionary criteria, without also meeting one or more of the exclusionary criteria, were invited to take part in the study.

**Inclusionary Criteria**

1. Adult inmates at the SCDOC currently on the MHU.
2. History of criminal recidivism.
3. Planned discharge date greater than 5 months and less than 12 months in the future.
4. Compliant with treatment recommendations.
5. Stable on medications.
6. Motivation for change (stated desire to break their pattern of criminal behavior and incarceration).
7. A stated desire to participate in the study.

**Exclusionary Criteria**

1. Medical conditions that preclude able to participate in a group setting for up to 2 hours at a time.
2. Active psychosis.
3. Inability to participate intellectually due to developmental or language barriers.
4. Display of behaviors disruptive to the group process.
5. Participation in behaviors that are dangerous to self or others.
6. Under the age of 18 years old during the study period.
7. A stated desire not to participate in the study.

**Obtaining Consent**

Following the structured interviews, all eligible potential participants were formally invited to a group meeting. At this meeting, potential participants were informed of the purpose of the study, the research design, the risks and benefits of participation, and the voluntary nature of participation. All were invited to ask questions and to discuss their rights as volunteers and as inmates. They were informed that sentence adjustments, parole considerations, or other tangible benefits of participation were offered as payment for participation. They were informed that participation in the ARRAY group may provide other, soft, benefits including experiencing better relationships with themselves and loved ones, potentially decreasing their risk of re-incarceration, and reducing negative interactions with staff and peers. The primary investigator informed potential participants that their participation in the study will help develop a program that may reduce recidivism by persons with mental illness who are involved in the criminal justice system. After the researcher answers all of the participants’ questions, an invitation to sign the informed consent form and participate in the study was offered. Those who volunteered, were invited to participate in the study.

**Assessment Procedure**

All OMI who were invited into the study were administered the EPS-C assessment instrument before the initial ARRAY session. The EPS-C was also administered as a post-intervention measure following the close of the 12-session intervention.
The ARRAY Protocol

Closed Group

The ARRAY protocol is to deliver the 12-week intervention in a single, intact counseling group composed of up to 20 volunteer participants. Group therapy is an efficient CBT delivery modality (Morrison, 2002). A group of this size can be accommodated by the facility and has been found to be manageable by two counselors or counselor-trainees (Center for Substance Abuse Treatment, 1999). A disadvantage of a closed group is that attrition cannot be replenished with new members. An advantage of the closed group format is participants’ ability to develop safe relationships over the duration of the intervention, reduce the elements of guardedness and distrust familiar within correctional settings, and defuse the staff-inmate power dynamics (Loeffler et al., 2010). The closed group format provides a vehicle to develop social support and relationship skills that are important for institutional adjustment and stress management, as well as a protective factor against criminal actions (Cullen, Wright, & Chamlin, 1999; Lindquist, 2000).

Program Delivery

Before each session the treatment team met to review participants' progress and any prosocial or antisocial participant behaviors noted by the facility staff during the previous week. The team reviewed the week's lesson plan from the ARRAY manual and adapted the lesson presentation to meet any identified participants' needs. During group sessions the group facilitators followed the ARRAY manual structure of session plan (i.e., brief introductory affirmation, meditation reading, didactic lesson, skill practice, and closing process time). Weekly session lasted approximately 90 min and focused on different aspects of the ARRAY 5-box model addressing high-risk situations for relapse, warning signs of distress, menus of
available safe and unsafe coping skills, adherence to medication recommendations, limited use of mood-altering substances and activities, and wellness indicators. Following each session the counselors met with their supervisor (an experienced doctoral level corrections Licensed Professional Counselor and psychologist) to debrief the session, assess individual participants' involvement, process group dynamics, plan future topic presentations, and strategize follow-up tactics with specific participants. In each session co-counselors alternately led the discussion and practice components.

**Session Topics**

Session topics included 1) commitment to stay out of prison, 2) an introduction to the 5-box model, 3) development of wellness indicators, 4) refusal skills practice, 5) substance abuse specific relapse prevention, 6) anger management, 7) medication management, 8) symptoms of mental illness, 9) coping skill development, 10) relationship dynamics, and 11) communication skills. Participants learned to identify and self-monitor their individual high-risk situations, cognitive and emotional indicators of associated distress, and place a menu of safe and unsafe coping skills onto the 5-box self-regulation map. Participants developed a personal relapse prevention plan as a product of participation in the program.

**Sessions Map**

The 12 ARRAY sessions were delivered in the following order:

1. Introduction of the models (The 5-boxes model, Stages of Change)
2. Commitment to change: Quality worlds, introduction to Green Lights
3. Distress symptom identification (Yellow Lights, refusal skills and safe coping skills
4. Refusal Skills practice
5. High Risk Situations (Red Lights)
6. Introduction of relapse prevention plan
7. Medication Management
8. Substance Abuse specific
9. Anger Management
10. Building a Safe Recovery Environment/ aftercare & natural supports
11. Relapse Prevention Plan presentation
12. Adjournment: grief and loss, feedback to members, recognition, strength bombardment

Session Plan

The first planned session activity involves each person in the room verbalizing an affirmation about themselves or a peer using a round robin format. For the second planned activity, a counselor asked a volunteer participant to read from a daily meditation book and lead a brief discussion of reactions to the reading. Following the opening components, the counselors presented a brief didactic lesson on one aspect of the 5-box model. Each session included skills practice. The counselors taught group participants to coach each other using the model. Each session included live practice mapping red, yellow, and green lights and a process discussion of lessons learned. Participants and counselors acted as a team to coach and analyze situations arising naturally in the study setting. Using a fishbowl format, participants mapped personal high risk relapse situations or a current interpersonal interaction from the previous week onto the 5-box model for group discussion. As participants engaged with the program and learned to use the ARRAY model they were expected to take on increased responsibility for group management. The final activities of each session was the assignment of homework and the distribution of stickers. Homework assignments supplemented in-group discussions and encouraged participants to use the model outside sessions. Participants gave each other stickers
of cartoon characters and positive sayings from the facilitators’ collection as a fun positive reinforcer and contingency management device (Burdon, St. De Lore, Dang, Warda, & Prendergast, 2013).

**Skill Acquisition**

A foundational idea of ARRAY is that behavior change is possible through application of the ARRAY principles in daily life. Group members were encouraged to practice cognitive mapping and the use of new coping skills as they went through their daily routines. The facilitators created a safe environment participants were able to use as a behavior sandbox to practice and acquire new behavioral management skills. During each ARRAY session most of the time was allocated for practice mapping situations culled from members’ daily life. Situations that were mapped include interactions with other inmates, staff, and family members. Situations were then analyzed and discussed to determine what worked well and what could be different in the future. Members discussed, planned, and role-played alternative responses during the session.

**Homework.** Homework was assigned following each session. One standing homework assignment was practice using the 5-box model with peers, staff, and family in the prison environment. Homework assignments were discussed at the beginning of the following session. Often participants were given an individualized task to complete between sessions and report back to the group. Tasks included review of written material, envisionment of a potential self, journaling, outreach to a peer during a stressful time, or independent work on a topic related to a session discussion.
**Contingency Management**

Contingency management, or behavioral reinforcement, is a behavioral tool often used in addiction treatment programs due to its ability to shape participants’ reactions to stimuli through the mechanism of operant conditioning. Contingency management is often used to reinforce participants’ treatment engagement and subsequent psychological functioning. Burdon et al. (2013) conducted a study of the application of contingency management in prison substance abuse treatment where they found a positive moderation effect on depression in men and women. The researchers described a situation where environmental factors (i.e., participant-staff relations) may affect the strength of the intervention. ARRAY participants were reinforced for positive engagement in group sessions by earning stickers from each other and recognition by the facilitators.

**Strength Bombardment**

A strength bombardment, or Multiple Strength Perception Method, is a group exercise designed to provide participants with a broader view of positive aspects of their personality (Otto, 1967/2010). The exercise, developed through the Human Potentialities Research Project, has since been adapted to many settings, from elementary school classrooms to the boardrooms of multinational corporations. The strength bombardment is a simple, yet powerful, exercise where group members take turns sharing personal strengths and admirable characteristics about one target member. Benefits of a strength bombardment include greater attention to positive aspects of others, positive change in the interpersonal interactions of the target person toward significant others, and enhanced positive self-concept of the target member (Otto, 1967/2010). The format of the strength bombardment used in ARRAY was inspired by James (personal
communication, 15 August 2014). In the final ARRAY group exercise members engaged in a strength bombardment where each member rotated as the target of the strength bombardment.

**Relapse Prevention Planning**

Relapse is a very real prospect, especially during the period described by Prochaska and DiClimente’s (1982) transtheoretical change model as planning, action, and maintenance when new behaviors are unstable and not yet established in participants’ behavioral repertoire. The transtheoretical change model, presented early in the intervention, allows participants an opportunity to visualize and discuss personal successes with behavior change and coping with relapse. Marlatt, Parks, and Witkiewitz, (2002) discuss the concept of *apparently irrelevant decisions* to describe a process where small, subconscious, serial decisions lead one back into performing the very cognitions and behaviors that addictions treatment is designed to prevent. Apparently irrelevant decisions is a concept that operationalizes the Alcoholics Anonymous lore that a relapse begins long before the first drink is imbibed. ARRAY introduces the idea that relapse 1) is not inevitable, and 2) can be prevented with application of a few intentional practices.

**Final Product**

The final product of the ARRAY program is the development of an individualized relapse prevention plan identifying personal high-risk situations, warning signs and symptoms of high risk situations, menus of safe (vs unsafe) coping skill choices to manage the signs and symptoms, and the wellness balance indicative of the participant's chosen quality world. The relapse prevention plan is an individualized one-page handwritten summary of the program's 5-box model for mapping participant's cognitive, emotional, and behavioral responses to stimuli.
**Delimitations**

There are several delimitations in this study. First, every participant is a resident of the mental health unit of the correctional facility at the time of the study. Secondly, all participants were adult males. Third, all participants were volunteers who did not receive any tangible rewards to help with parole or sentence modifications. Finally, the protocol was developed to fit within a 15-week academic semester by counselors-in-training with no more than introductory training in the delivery of behavioral health interventions.

**Assumptions**

One assumption of this study is that improved mental health of OMI will translate into improved institutional adjustment and reduced criminal recidivism post-discharge.

**Results**

This study evaluated the Adult Recidivism Reduction Alternative (ARRAY) program, a research-based integrative group counseling intervention, implemented with adult men with mental illness who were incarcerated in a state prison by comparing participants’ scores on the anxiety, depression, posttraumatic stress disorder (PTSD), and low self-esteem scales of the Emotional Problem Scales – Self Report Inventory (Corrections) (EPS-C) (Daigle et al., 2015). This chapter presents the results of the statistical analyses used to answer the general research question.

**Analytic Procedure**

The procedure used to carry out this study involved several processes. The first process was the collection of data in the form of pre- and post-intervention scores on the Emotional Problems Scales for Corrections (EPS-C; Daigle et al., 2015) from multiple cohorts of ARRAY participants during the study period (see Appendix 1 for IRB approval). Study participants were
assigned a unique 8-digit alphanumeric code to protect their privacy and anonymize the data.

From the anonymous data, each of the comparison groups were created. The second process was the scoring of individual participants’ responses to the EPS-C. The final process involved in the analysis of the data used in this study was to conduct the statistical analysis. Each of these processes is detailed below.

**Comparison Group Creation**

There are five groups compared in this study: ARRAY-Pre-, ARRAY-POST-, MOTIVATED, MATCH, and NORM. The ARRAY sample ($n = 33$) is comprised of those participants who finished the ARRAY program and responded to the EPS-C at pre- and post-intervention. If a participant responded to the EPS-C at multiple ARRAY measurement points, only their scores from their first iteration are included in this study. The MOTIVATED sample ($n = 38$) is comprised of those participants who initially engaged in, but did not finish, the ARRAY intervention. If a participant responded to the EPS-C at multiple ARRAY measurement points, only their scores from their first iteration are included in this study. To create the MATCH group, a multi-step process was performed. First, all subjects in the EPS-C normative sample identified as mentally ill were selected out of the normative sample ($n = 61$) and placed into NORM-MH. Second, using SPSS, a random sample ($n = 39$) of was selected out of NORM-MH to approximate the MOTIVATED sample size and create MATCH. To decrease the possibility of comparison of like cases subjects in the EPS-C normative sample identified as having a mental illness were removed from the normative group for this analysis, providing a non-mentally ill comparison sample labeled as NORM ($n = 376$).
EPS-C Scoring

Following creation of the comparison groups, Individual subjects’ responses to the EPS-C were entered into an Excel spreadsheet for sorting and exported to SPSS for analysis. Subjects were scored using SPSS syntax supplied by the authors of the EPS-C. Individual subjects’ scale scores were grouped into the comparison groups according to the inclusion criteria.

Statistical Analysis

Each of the research questions is comprised of two related sub-questions: 1) what is the relationship between the comparison groups, and 2) what is the effect of the intervention between the pre-intervention and post-intervention groups? Three statistical analyses were conducted using SPSS.

Between-group analysis. To determine between-group interactions on each EPS-C scale of interest (anxiety, depression, PTSDS, and low self-esteem), one-way ANOVAs were conducted to determine the presence of differences between the comparison groups. Levene’s test for homogeneity of variance was conducted to test the assumption of homogeneity, that the variances of the group means are equal. When Levene’s test was significant, meaning the assumption of homogeneity of variance was not met, a Welch’s Analysis of Variance (ANOVA) was conducted. Otherwise, a standard ANOVA was conducted. The Welch test was used as needed to account for heterogeneity in variances between the comparison groups. One ANOVA was conducted to determine the presence of differences between the ARRAY Pre-group and MOTIVATED, MATCH, and NORM. A second ANOVA was conducted to determine the presence of differences between the ARRAY Post-group and MOTIVATED, MATCH, and NORM. The grouping factor (Dependent Variable) was comparison group and the Independent Variable was the respondents’ mean scores. The alpha level for the ANOVA tests was set at .05. 

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When there was a statistical significance determined between any of the comparison groups for any of the EPS-C scales, a post-hoc analysis was conducted. When Levene’s test was non-significant, meaning the assumption of homogeneity of variance was met, a Tuckey post hoc pairwise group comparison was conducted to determine which of the comparison group pairs differed significantly. When Welch’s ANOVA was significant, the variances of the group means are assumed to be unequal, and a Games-Howell post hoc pairwise comparison was conducted to determine which of the comparison group pairs differed significantly. Both the Tuckey and Games-Howell tests control the family error rate for the entire set of comparisons and reduce Type I error.

**Pre- to Post-analysis.** To determine the intervention effect, a pre- versus post-intervention analysis was conducted using a repeated measures t-test at a significance level adjusted to account for threats to the Type I error rate. The alpha level for the t-tests is .05.

**Effect size.** Effect sizes were calculated for all three analyses. Cohen’s D was calculated for each t-test to determine the strength of the effect size of the intervention. Eta-squared was calculated for the effect of group for each ANOVA. An indication of the strength of the effect size, based on guidelines put forth by Cohen (1988) that effect size may be small ($d = 0.20$), moderate ($d = 0.50$), and large ($d = 0.80$), is presented.

**Research Questions**

The general research question to be answered by this study is whether there are differences in the group means of the pre- and post-intervention scores on the EPS-C anxiety, depression, PTSD, and low self-esteem scales for the ARRAY intervention group compared to a motivated OMI (MOTIVATED) control group, a matched OMI (MATCH) control group, and a
general inmate population control group (NORM). From this general research the following specific questions are drawn:

**Question 1: Anxiety**

Are there differences between pre- and post-intervention scores on the EPS-C anxiety scale for the ARRAY experimental group compared to the MOTIVATED, MATCH, and NORM control groups?

*Figure 2. Mean EPS-C Anxiety scores by comparison group*

**Table 1**

*Descriptive Statistics for the Comparison Groups on the Anxiety Scale*

<table>
<thead>
<tr>
<th>Anxiety</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-intervention</td>
<td>14.36</td>
<td>6.42</td>
</tr>
<tr>
<td>Post-intervention</td>
<td>13.24</td>
<td>5.99</td>
</tr>
<tr>
<td>MOTIVATED</td>
<td>13.50</td>
<td>2.48</td>
</tr>
<tr>
<td>MATCH</td>
<td>14.33</td>
<td>5.80</td>
</tr>
<tr>
<td>NORM</td>
<td>10.80</td>
<td>4.43</td>
</tr>
</tbody>
</table>

Figure 2 is included to show the mean EPS-C anxiety scores for each of the comparison groups. As can be seen the ARRAY-Pre- and MATCH groups are similar, the ARRAY-Post- and
MOTIVATED groups are similar, and the NORM group had lower scores than any of the groups.

Table 1 includes the mean (\(M\)) and standard deviation (\(SD\)) for each of the comparison groups on the anxiety scale.

**Comparison Groups Prior to Intervention**

To determine if the comparison groups experienced similar levels of anxiety before initiating the ARRAY intervention a one-way ANOVA was conducted between the ARRAY-Pre- \((n = 33)\), MOTIVATED \((n = 38)\), MATCH \((n = 39)\), and NORM \((n = 375)\) samples.

**Assumption of homogeneity of variances.** The assumption of homogeneity of variances was not met, as assessed by Levine’s Test of Homogeneity of Variances \(F(3, 481) = 12.481, p < .001\), at an alpha level of .05. Therefore, the null hypothesis that no difference between the variances of the group means is rejected. Consequently, Welch’s ANOVA was conducted to compare pairwise groups.

**ANOVA.** Welch’s \(F(3, 71.45) = 16.108, p < .001\), \(\eta^2 = .08\) is statistically significant at an alpha level of .05, indicating that at least two of the four comparison groups differ significantly on their mean scores for anxiety. ARRAY provided a small contribution to the changes experienced by participants. A Games-Howell post-hoc test was conducted to determine which pairwise groups are significantly different for anxiety scores.

**Post-hoc analysis.** A Games-Howell post-hoc pairwise comparison showed that at the pre-intervention measure, the NORM group \((n = 375, M = 10.80, SD = 4.43)\) reported significantly less anxiety than the groups identified as having mental illness: ARRAY-Pre- \((n = 33, M = 14.36, SD = 6.42)\), MOTIVATED \((n = 38, M = 13.50, SD = 2.48)\), and MATCH \((n = 39, M = 14.33, SD = 5.80)\). There was no significant difference shown between ARRAY-Pre-, MOTIVATED, and MATCH, indicating that these groups have similar levels of anxiety.
Comparison Groups Following the Intervention

To determine if the comparison groups experienced similar levels of anxiety after the completion of the ARRAY intervention a one-way ANOVA was conducted between the ARRAY-Post- \( (n = 33) \), MOTIVATED \( (n = 38) \), MATCH \( (n = 39) \), and NORM \( (n = 375) \) samples.

Assumption of homogeneity of variances. The assumption of homogeneity of variances was not met, as assessed by Levine’s Test of Homogeneity of Variances \( F(3, 481) = 10.76, p < .001 \), at an alpha level of .05. Therefore, the null hypothesis that no difference between the variances of the group means is rejected. Consequently, Welch’s ANOVA was conducted to compare pairwise groups.

ANOVA. Welch’s \( F(3, 71.65) = 14.943, p < .001, \eta^2 = .07 \) was statistically significant at an alpha level of .05, indicating that at least two of the four comparison groups differ significantly on their mean scores for anxiety. ARRAY provided a small contribution to the changes experienced by participants. A Games-Howell post-hoc test was conducted to determine which pairwise groups are significantly different for anxiety scores.

Post-hoc analysis. A Games-Howell post-hoc pairwise comparison showed that at the post-intervention measure, the NORM group \( (n = 375, M = 10.80, SD = 4.43) \) reported significantly less anxiety than the MOTIVATED \( (n = 38, M = 13.50, SD = 2.48) \) and MATCH \( (n = 39, M = 14.33, SD = 5.80) \) groups. The ARRAY-Post- \( (n = 33, M = 13.24, SD = 5.99) \) reported improved levels of anxiety that are not statistically significantly different from those reported by NORM subjects.

Pre-intervention versus Post-intervention \( t \)-test

The repeated measures \( t \)-test for the means of the Pre- \( (n = 33, M = 14.36, SD = 6.42) \) and Post- \( (n = 33, M = 13.24, SD = 5.99) \) intervention measures of anxiety showed that while there is
a reduction in reported anxiety from pre- to post-intervention (mean difference = 1.12) the reduction is not statistically significant $t(32) = 1.41, p = .169, 95\% \text{ CI } [-.50, 2.75]$. The dependent samples effect size for this analysis ($r = .729, d = .18$) was found to be small.

**Summary**

Prior to participation in the ARRAY group intervention there were no between-groups differences among OMI, although anxiety is more pronounced in the OMI groups than in the NORM group. After the intervention, there continued to be no between-groups differences among OMI, and the significant differences between the ARRAY participant group and the general population sample disappeared. While changes in the reported levels of anxiety were found from Pre- to Post- measures, those reductions were not statistically significant.

**Question 2: Depression**

Are there differences between pre- and post-intervention scores on the EPS-C depression scale for the ARRAY experimental group compared to the MOTIVATED, MATCH, and NORM control groups?

![Figure 3. Mean EPS-C Depression scores by comparison group](image)
Figure 3 is included to show the mean EPS-C depression scores for each of the
comparison groups. As can be seen the MOTIVATED and NORM groups are similar, while the
ARRAY-Post- group had significantly lower scores than any of the other comparison groups.

Table 2 includes the mean (M) and standard deviation (SD) for each of the comparison
groups on the depression scale.

### Comparison Groups Prior to Intervention

To determine if the comparison groups experienced similar levels of depression before
initiating the ARRAY intervention a one-way ANOVA was conducted between the ARRAY-Pre-
(n = 32), MOTIVATED (n = 38), MATCH (n = 39), and NORM (n = 376) samples.

**Assumption of homogeneity of variances.** The assumption of homogeneity of
variances was not met, as assessed by Levine’s Test of Homogeneity of Variances $F(3, 481) =
81.371, p < .001$, at an alpha level of .05. Therefore, the null hypothesis that no difference
between the variances of the group means is rejected. Consequently, Welch’s ANOVA was
conducted to compare pairwise groups.
**ANOVA.** Welch’s $F(3, 61.646) = 1.931, p = .134, \eta^2 = .04$ is not statistically significant at an alpha level of .05, indicating that at all of the four comparison groups have similar mean scores for depression. ARRAY provided a small contribution to the changes experienced by participants.

**Comparison Groups Following the Intervention**

To determine if the comparison groups experienced similar levels of depression after the completion of the ARRAY intervention a one-way ANOVA was conducted between the ARRAY-Post- ($n = 32$), MOTIVATED ($n = 38$), MATCH ($n = 39$), and NORM ($n = 376$) samples.

**Assumption of homogeneity of variances.** The assumption of homogeneity of variances was not met, as assessed by Levine’s Test of Homogeneity of Variances $F(3, 481) = 62.144, p < .001$, at an alpha level of .05. Therefore, the null hypothesis that no difference between the variances of the group means is rejected. Consequently, Welch’s ANOVA was conducted to compare pairwise groups.

**ANOVA.** Welch’s $F(3, 61.925) = 11.364, p < .001, \eta^2 = .165$ was statistically significant at an alpha level of .05, indicating that at least two of the four comparison groups differ significantly on their mean scores for depression. ARRAY provided a moderate contribution to the changes experienced by participants. A Games-Howell post-hoc test was conducted to determine which pairwise groups are significantly different for depression scores at an alpha level of .05.

**Post-hoc analysis.** A Games-Howell post-hoc pairwise comparison showed that at the post-intervention measure, the ARRAY-Post- group ($n = 32, M = 6.97, SD = 5.25$) showed statistically significant fewer symptoms of depression than either the MOTIVATED ($n = 38, M = 12.13, SD = 2.75$) or the NORM ($n = 376, M = 12.09, SD = 2.28$) groups. Lower levels of
depression are reported by the ARRAY-Post- group \((n = 32, M = 6.97, SD = 5.25)\) when compared to the MATCH group \((n = 39, M = 9.74, SD = 6.43)\), however they are not statistically significant.

**Pre-intervention versus Post-intervention \(t\)-test**

The repeated measures \(t\)-test for the means of the Pre- \((n = 31, M = 11.10, SD = 6.98)\) and Post- \((n = 31, M = 7.16, SD = 5.22)\) intervention measures of depression showed that there is a statistically significant reduction \(t(30) = 3.80, p = .001, 95\% CI [1.82, 6.05]\) in reported depression from pre- to post-intervention (mean difference = 3.94) at an alpha level of .05. The dependent samples effect size for this analysis \((r = .587, d = .62)\) was found to be moderate.

**Summary**

Prior to participation in the ARRAY group intervention there were no between-groups differences among OMI in reported levels of depression. The pre-intervention group with the lowest levels of reported depression was the MATCH group. After the intervention, the ARRAY-Post- group showed lower levels of depression when compared to each of the comparison groups. These levels were statistically significant versus both the MOTIVATED and NORM samples. Participation in ARRAY is associated with a statistically significant reduction in depression symptoms for the experimental group.

**Question 3: PTSD**

Are there differences between pre- and post-intervention scores on the EPS-C PTSD scale for the ARRAY experimental group compared to the MOTIVATED, MATCH, and NORM control groups?
Figure 4. Mean EPS-C PTSD scores by comparison group

Table 3

Descriptive Statistics for the Comparison Groups on the PTSD Scale

<table>
<thead>
<tr>
<th>PTSD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-intervention</td>
<td>7.30</td>
<td>2.53</td>
</tr>
<tr>
<td>Post-intervention</td>
<td>6.22</td>
<td>2.56</td>
</tr>
<tr>
<td>MOTIVATED</td>
<td>4.95</td>
<td>1.31</td>
</tr>
<tr>
<td>MATCH</td>
<td>6.62</td>
<td>2.79</td>
</tr>
<tr>
<td>NORM</td>
<td>4.88</td>
<td>2.87</td>
</tr>
</tbody>
</table>

Figure 4 is included to show the mean EPS-C PTSD scores for each of the comparison groups. As can be seen the MOTIVATED and NORM groups are similar, and have the lowest PTSD scores of the comparison groups.

Table 3 includes the mean (M) and standard deviation (SD) for each of the comparison groups on the PTSD scale.
Comparison Groups Prior to Intervention

To determine if the comparison groups experienced similar levels of PTSD before initiating the ARRAY intervention a one-way ANOVA was conducted between the ARRAY-Pre- (n = 33), MOTIVATED (n = 38), MATCH (n = 39), and NORM (n = 376) samples.

Assumption of homogeneity of variances. The assumption of homogeneity of variances was not met, as assessed by Levine’s Test of Homogeneity of Variances $F(3, 482) = 9.416, p < .001$, at an alpha level of .05. Therefore, the null hypothesis that no difference between the variances of the group means is rejected. Consequently, Welch’s ANOVA was conducted to compare pairwise groups.

ANOVA. Welch’s $F(3, 77.33) = 9.416, p < .001$, $\eta^2 = .07$ is statistically significant at an alpha level of .05, indicating that at least two of the four comparison groups differ significantly on their mean scores for PTSD. ARRAY provided a small contribution to the changes experienced by participants. A Games-Howell post-hoc test was conducted to determine which pairwise groups are significantly different for depression scores.

Post-hoc analysis. A Games-Howell post-hoc pairwise comparison showed that at the pre-intervention measure, the ARRAY-Pre- (n = 33, $M = 7.30, SD = 2.53$) and MATCH (n = 39, $M = 6.62, SD = 2.79$) groups reported significantly greater levels of PTSD symptoms than the NORM group (n = 376, $M = 4.88, SD = 2.87$) and the MOTIVATED (n = 38, $M = 4.95, SD = 1.31$) group.

Comparison Groups Following the Intervention

To determine if the comparison groups experienced similar levels of PTSD symptomology after the completion of the ARRAY intervention a one-way ANOVA was
conducted between the ARRAY-Post- \((n = 32)\), MOTIVATED \((n = 38)\), MATCH \((n = 39)\), and NORM \((n = 376)\) samples.

**Assumption of homogeneity of variances.** The assumption of homogeneity of variances was not met, as assessed by Levine’s Test of Homogeneity of Variances \(F(3, 481) = 9.41, p < .001\), at an alpha level of .05. Therefore, the null hypothesis that no difference between the variances of the group means is rejected. Consequently, Welch’s ANOVA was conducted to compare pairwise groups.

**ANOVA.** Welch’s \(F(3, 71.12) = 6.70, p < .001, \eta^2 = .04\) was statistically significant at an alpha level of .05, indicating that at least two of the four comparison groups differ significantly on their mean scores for PTSD. ARRAY provided a small contribution to the changes experienced by participants. A Games-Howell post-hoc test was conducted to determine which pairwise groups are significantly different for anxiety scores.

**Post-hoc analysis.** A Games-Howell post-hoc pairwise comparison showed that at the post-intervention measure, the ARRAY-Post- group \((n = 32, M = 6.22, SD = 2.56)\) and MATCH group \((n = 39, M = 6.62, SD = 2.79)\) showed similar levels of PTSD symptoms as both the MOTIVATED \((n = 38, M = 4.95, SD = 1.31)\) and the NORM \((n = 376, M = 4.88, SD = 2.87)\) groups.

**Pre-intervention versus Post-intervention t-test**

The repeated measures \(t\)-test for the means of the Pre- \((n = 32, M = 7.25, SD = 2.55)\) and Post- \((n = 32, M = 6.22, SD = 2.56)\) intervention measures of PTSD showed that there is a reduction \(t(31) = 2.375, p = .024, 95\% \text{ CI } [1.15, 1.92]\) in reported PTSD from pre- to post-intervention (mean difference = 1.03) that is statistically significant at an alpha level of .05. The dependent samples effect size for this analysis \((r = .539, d = .40)\) was found to be moderate.
Summary

Prior to participation in the ARRAY group intervention levels of PTSD symptoms were higher in both the ARRAY Pre-group and the MATCH group compared to the MOTIVATED and NORM groups. Participation in ARRAY is associated with a statistically significant reduction in PTSD symptoms for the experimental group. At post-intervention, the ARRAY Post- and MATCH groups still report higher levels of PTSD than either the MOTIVATED or NORM groups.

Question 4: Low Self-Esteem

Are there differences between pre- and post-intervention scores on the EPS-C low self-esteem scale for the ARRAY experimental group compared to the MOTIVATED, MATCH, and NORM control groups?

Figure 5. Mean EPS-C Low Self-Esteem scores by comparison group
Figure 2 is included to show the mean EPS-C self-esteem scores for each of the comparison groups. As can be seen the Pre- and MOTIVATED groups are similar, and the NORM group had highest scores than any of the groups. On this scale, higher scores equate to lower levels of self-esteem.

Table 1 includes the mean ($M$) and standard deviation ($SD$) for each of the comparison groups on the self-esteem scale.

**Comparison Groups Prior to Intervention**

To determine if the comparison groups experienced similar levels of self-esteem before initiating the ARRAY intervention a one-way ANOVA was conducted between the ARRAY-Pre- ($n = 31$), MOTIVATED ($n = 37$), MATCH ($n = 39$), and NORM ($n = 373$) samples.

**Assumption of homogeneity of variances.** The assumption of homogeneity of variances was not met, as assessed by Levine’s Test of Homogeneity of Variances $F(3, 476) = 80.959, p < .001$, at an alpha level of .05. Therefore, the null hypothesis that no difference
between the variances of the group means is rejected. Consequently, Welch’s ANOVA was conducted to compare pairwise groups.

**ANOVA.** Welch’s $F(3, 61.19) = 17.989, p < .001, \eta^2 = .16$ is statistically significant at an alpha level of .05, indicating that at least two of the four comparison groups differ significantly on their mean scores for depression. ARRAY provided a moderate contribution to the changes experienced by participants. A Games-Howell post-hoc test was conducted to determine which pairwise groups are significantly different for depression scores.

**Post-hoc analysis.** A Games-Howell post-hoc pairwise comparison showed that at the pre-intervention measure, the ARRAY-Pre-group ($n = 31, M = 9.48, SD = 6.79$) is statistically similar to the MOTIVATED ($n = 37, M = 9.98, SD = 2.36$), MATCH ($n = 39, M = 7.95, SD = 6.83$), and NORM ($n = 373, M = 12.40, SD = 2.33$).

**Comparison Groups Following the Intervention**

To determine if the comparison groups experienced similar levels of self-esteem after the completion of the ARRAY intervention a one-way ANOVA was conducted between the ARRAY-Post- ($n = 32$), MOTIVATED ($n = 37$), MATCH ($n = 39$), and NORM ($n = 373$) samples.

**Assumption of homogeneity of variances.** The assumption of homogeneity of variances was not met, as assessed by Levine’s Test of Homogeneity of Variances $F(3, 477) = 62.99, p < .001$, at an alpha level of .05. Therefore, the null hypothesis that no difference between the variances of the group means is rejected. Consequently, Welch’s ANOVA was conducted to compare pairwise groups.

**ANOVA.** Welch’s $F(3, 62.18) = 27.33, p < .001, \eta^2 = .258$ was statistically significant at an alpha level of .05, indicating that at least two of the four comparison groups differ significantly on their mean scores for anxiety. ARRAY provided a large contribution to the
changes experienced by participants. A Games-Howell post-hoc test was conducted to determine which pairwise groups are significantly different for self-esteem scores.

**Post-hoc analysis.** A Games-Howell post-hoc pairwise comparison showed that at the post-intervention measure, the ARRAY-Post- \((n = 32, M = 6.34, SD = 5.64)\) reported higher self-esteem than the MOTIVATED \((n = 37, M = 9.97, SD = 2.36)\) and the NORM group \((n = 373, M = 120.40, SD = 2.33)\).

**Pre-intervention versus Post-intervention \(t\)-test**

The repeated measures \(t\)-test for the means of the Pre- \((n = 31, M = 9.48, SD = 6.79)\) and Post- \((n = 31, M = 6.42, SD = 5.72)\) intervention measures of low self-esteem showed that there is a statistically significant increase \(t(30) = 3.19, p = .003, 95\% \text{ CI } [1.10, 5.03]\) in reported self-esteem from pre- to post-intervention (mean difference = 3.94) at an alpha level of .05. The dependent samples effect size for this analysis \((r = .646, d = .48)\) was found to be moderate.

**Summary**

Prior to participation in the ARRAY group intervention there were no differences between the ARRAY-Pre-group and the comparison groups. The MOTIVATED and MATCH groups both reported significantly higher levels of self-esteem than the general population NORM group. Participation in ARRAY is associated with a statistically significant increase in self-esteem for the experimental group. At post-intervention, the ARRAY-Post-group reported improved levels of self-esteem compared to the MOTIVATED and NORM groups.

**Comparison of \(t\)-Tests**

Table 5 summarizes the pre- to post-intervention results for each variable examined in this study. Group sample sizes differ for each variable: anxiety \((n = 33)\), depression \((n = 32)\), PTSD \((n = 33)\), low self-esteem \((n = 31)\). Effect sizes were calculated for the dependent samples
using the test statistics $t$, $n$, and $r$ using Lenhard and Lenhard’s (2016) online effect size calculator.

Table 5

Results of t-tests for the experimental group at pre- and post-intervention, by EPS-C scale

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-intervention</th>
<th>Post-intervention</th>
<th>$t^{**}$</th>
<th>$\rho$</th>
<th>95% CI</th>
<th>$d^*$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-.50, 2.75]</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td>.18</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>11.10</td>
<td>6.98</td>
<td>7.16</td>
<td>5.22</td>
<td>3.803</td>
<td>.001</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>PTSD</td>
<td>7.25</td>
<td>2.55</td>
<td>6.22</td>
<td>2.56</td>
<td>2.375</td>
<td>.024</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.40</td>
<td></td>
</tr>
<tr>
<td>Low Self-Esteem</td>
<td>9.48</td>
<td>6.79</td>
<td>6.42</td>
<td>5.72</td>
<td>3.191</td>
<td>.003</td>
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<td>[1.10, 5.03]</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>.48</td>
<td></td>
</tr>
</tbody>
</table>

Note. *$d$ computed for dependent samples using $t$, $n$, and $r$ using the online effect size calculator found at [http://www.psychometrica.de/effect_size.html#dep](http://www.psychometrica.de/effect_size.html#dep) **$n$ for each group differs.

Discussion

The United States’ correctional system, as the biggest provider of residential mental health services in the country, is both underfunded and unprepared to treat prisoners’ mental illness. Beginning in the Reagan administration of the 1980s, public policy shifted from funding for public, community-based mental health services to funding for criminal justice policies, resulting in an increased role of the correctional industry in the treatment of mental illness and substance use disorders. The U.S. now incarcerates more people than any other country in the world, with the possible exception of the Democratic People’s Republic of Korea (Schmitt et al., 2010). There are more people with mental illness in state prisons than there are in state psychiatric hospitals (Torrey et al., 2014); often asserted in the news media is the claim that the
jails in Cook County, IL, Los Angeles County, CA, and Rikers Island in New York are the three largest mental health providers in the nation (Arceneaux, 2013). A third of all prisoners have a serious mental illness, most with a co-occurring substance use disorder (Steadman et al., 2009). Prisoners with mental illness are at high risk for re-arrest; and, consequently, to have longer incarceration histories compared with prisoners without mental illness (Cloyes et al., 2010; James & Glaze, 2006; Lovell et al., 2002).

The correctional system, however, was built to segregate prisoners from society as punishment for antisocial behavior. Indeed, the U. S. correctional system has little incentive or resources to prepare prisoners to contribute to society following discharge (Schmitt et al., 2010). A typical prison mental health treatment array is restricted to intake screening for symptoms of mental illness, psychopharmacology, crisis intervention, and referrals for community-based services post-discharge (Brandt, 2012; Lovell et al., 2002; Steadman & Veysey, 1997). When criminal justice systems include an adjunctive group counseling intervention they increase the ability of prisoners with mental illness to cooperate with peers and facility staff. Increased prisoner cooperation increases facility security, reduces operational costs, and allows prisoners to practice living in ways that reduce criminal recidivism. However, there is a paucity of research about both mental illness among male prisoners and about treatments for mental illness that increase the chances that OMI will behave prosocially following discharge from prison.

The purpose of this chapter is to discuss how the pilot Adult Recidivism Reduction Alternatives (ARRAY) research-based integrative group counseling program filled a gap in the mental illness treatment continuum of a regional prison in the mid-southern region of the United States. In this study, the 12-week ARRAY intervention was provided to adult men with mental illness who were resident in the prison’s designated mental health unit. This study examined the
ARRAY group counseling program as an efficient, low-cost addition to the routine correctional mental health treatment system that can contribute to a reduction in the impact of prison on OMI and the subsequent societal costs of crime and incarceration.

The intention of the ARRAY program is to teach participants self-management skills that prepare them for discharge. ARRAY uses a simple technology of mapping affective, behavioral, and cognitive stress indicators (yellow lights) onto the model’s 5-box schematic to help participants visualize relationships between stress and dysfunctional behavior. When participants can recognize their yellow lights they are positioned to choose from a menu of safe and unsafe coping responses to reduce their distress. Safe coping responses move participants closer to their self-defined wellness-based potential self (green lights), associated with low-risk for relapse. Unsafe coping responses are associated with participants’ dysfunctional working self and high-risk for relapse (red lights). ARRAY encourages the active practice of effective coping skills by participants through in-session roleplays and with peers, facility staff, and family as homework.

To determine if ARRAY is effective as a treatment for mental illness, this study examined the general research question of whether there are differences in the group means of the pre- and post-intervention scores on the anxiety, depression, PTSD, and low self-esteem scales of the Emotional Problems Scales for Corrections (EPS-C; Daigle et al., 2015) for the ARRAY intervention group compared to a motivated OMI (MOTIVATED) control group, a matched OMI (MATCH) control group, and a general inmate population control group (NORM). The findings of the study will be discussed along with implications for the ARRAY program, the counseling field, and for clients as well as with recommendations for future research.
Effects of the Intervention

This section will examine the findings of this study for anxiety, depression, PTSD, and low self-esteem and how these findings were affected by the ARRAY program. Discussion about ARRAY, as it was applied in the prison setting, is presented. Included in this discussion are anecdotes from the study.

Anxiety

Anxiety is a prominent feature of mental illness in prison; prevalence rates of anxiety are higher in prisons than are those found in the general public. Anxiety prevalence as high as 35% have been reported among OMI (Allnutt et al., 2008; Drapalski et al., 2009; Shinkfield & Graffam, 2010). A finding of this study was that anxiety is both common and difficult to manage in the correctional environment.

For OMI, anxiety is a greater feature of the prison experience than it is for the general prison population. Group mean scores on the EPS-C anxiety scale for the ARRAY-Pre-, MOTIVATED, and MATCH comparison groups all reported significantly higher levels of distress than the NORM group. OMI’s anxiety scores were still elevated following completion of the ARRAY program relative to the NORM group; although, ARRAY participants’ anxiety did improve over the course of the 12-week intervention to levels of distress similar to those reported by the non-mentally ill general population group. While the findings of this study indicated that ARRAY participation was associated with a reduction in anxiety, the reduction did not achieve statistical significance ($p = .169$).

Reasons for change. Reasons for change in participants’ anxiety levels may be attributed to the components of the ARRAY program. ARRAY uses a group counseling modality as a vehicle for participants’ affective, behavioral, and cognitive change. During the intervention
participants learned about their warning yellow lights, enhanced their menus of coping skills, identified relapse red lights, created wellness green lights, encouraged each other, and acquired prosocial coping skills through active practice of their relapse prevention plans. As these activities were carried out, this researcher observed increased levels of sharing and trust among participants. Participants reported the ARRAY group was a safe place to share feelings with other group members.

**Yellow lights.** Research (James & Glaze, 2006; Reinhardt & Rogers, 1998) indicates many common anxiety signs and symptoms reported by prisoners, including: sleep disturbance, defensiveness, irritability, hypervigilance, nervousness, powerlessness, a sense of impending danger, and trouble concentrating or thinking about anything other than their worry about surviving in prison. During intervention group sessions, ARRAY participants learned to identify their anxiety-related yellow lights through the process of mapping their prison experiences onto ARRAY’s 5-box schematic. In each session, one participant volunteered to map the group’s conversations on the whiteboard. At the close of the session the group analyzed the map and discussed which anxiety indicators were identified and which coping responses were practiced during the session. Facilitators coached participants to identify signs of anxiety and coping during the mapping and processing activities. As participants began to recognize their yellow lights they gained a measure of control over their choice of coping responses, and, hence a reduction in the amount of anxiety in their stress-vulnerability buckets (Brabban & Turkington, 2014) and a corresponding increase in the amount of energy available to direct toward living as their potential self.

**Coping.** ARRAY participants were introduced to a number of safe coping skills and wellness-based strategies for anxiety management while they participated in the intervention.
Skills of basic grounding techniques, intentional breathing, perspective taking, evidence seeking, refusal skills, environmental management of stressors, seeking to control only what can be controlled, approach-based social skills, and active listening were taught to participants. A primary activity conducted during each group session was participants’ processing conversation maps developed during the session. Through this activity existing safe coping skills were identified and practiced by participants and facilitators. Participants routinely brought to ARRAY sessions discussion material about their experiences of the intentional use of safe coping skills and behavioral changes they practiced with peers in the prison setting and family members during phone calls and visitation times.

**Coping skill acquisition.** In addition to increasing connections and universality, the group process is a vehicle by which ARRAY participants enhance their menu of coping skills. In ARRAY, learning to respond proactively, and to stop reacting, to situations is a key educational activity. Participants come to the program with minimal coping mechanisms. Many of their coping habits are unsafe, increasing participants’ risk of incarceration and exposure to high relapse risk situations. Using the program’s mapping technology, participants were guided to build their menu of safe coping tools through the collective knowledge of the group and the active practice of new skills. Participants were encouraged to first, observe group facilitators and participants demonstrate skills; second, practice skills in the group; and third, practice skills with peers, facility staff, and family members. Participants often processed in group their experiences using newly acquired coping skills.

**Red lights.** ARRAY helped participants uncover their relapse risk red lights and identify when they are at high-risk for the use of behaviors associated with incarceration. Common red lights of ARRAY participants were substance use, violence toward self and others, associating
with antisocial people, being in parts of town where they had used substances or committed crimes, feeling disconnected from themselves or significant others, feeling anxious or fearful, and feeling powerless or helpless. The identification of their idiosyncratic relapse risk factors provided participants with additional insight into their yellow warning lights and unsafe coping resources.

**Green lights.** A unique feature of the ARRAY program is participants’ creation of a wellness-based prosocial alternative identity to counter their working, antisocial identity (Bushway & Paternoster, 2013). During early ARRAY program sessions participants create an alternative ideal identity that is free of the anxiety produced by the high relapse risk red light cognitions and behaviors associated with incarceration. The creation of an alternative, wellness-based, potential self-presented participants with a tool they used for motivation and measure of progress toward their goals (Wagner & Ingersoll, 2012). The potential self represents participants’ ability to actualize their green lights. The green lights balance the life tasks of work and leisure alongside their relationships with themselves, their families, and how they find meaning in the world (Myers & Sweeney, 2008). ARRAY participants were able to verbalize the dominant role of criminal and substance use behaviors in their lives; they often remarked on how visualizing the time allotted to using substances and acting criminally eroded time spent doing pleasurable activities with family. The insight provided by this group exercise provided participants with motivation to re-prioritize their lives as they connected the five areas of wellness in prosocial ways.

**Group process.** Cognitive-behavioral group therapy is effective for the treatment of transdiagnostic anxiety disorders (Norton, 2008). There are a number of factors inherent in cognitive-behavioral therapy groups that contribute to participants’ change. These factors
include optimism, inclusion, group-based learning, shifting self-focus, modification of maladaptive relational problems, group cohesiveness, and emotional processing (Bieling et al., 2006). All of the CBT group factors described by Bieling and associates can be found in the ARRAY experience.

ARRAY participants were able to use these therapy group factors to get relief from the anxiety related to the isolation and social disconnection OMI are subject to in much of their lives—both in and out of prison. Additionally, ARRAY participants often experienced anxiety related to internalized stigma related to their status as prisoners and as persons with mental illness. OMIs’ internalized stigmas are often reinforced both by their environment and by the facility staff, peers, and family they routinely interact with.

**Jailing.** Prison is a place of deprivation; there is a wealth only of time, anger, and desperation. As described by Crewe et al. (2013), OMI adapt to the harsh prison environment through a protective technique known as *jailing*. Jailing is a cultural phenomenon in which OMI psychologically isolate themselves for protection against emotional and physical harm by donning an *inmate suit*, or inmate identity. Without intervention, OMI will continue jailing after they leave prison, further expanding the barriers between themselves and their families and communities. When ARRAY participants engaged with a group cohort they used the group factors of inclusion, shifting self-focus, modification of maladaptive relational problems, group cohesiveness, and emotional processing as they gradually began to dismantle the protection of their inmate suit and interacted with peers in an emotionally vulnerable manner. Engaging in these processes helps participants to discriminate between true friends with whom they can build trusting relationships (green lights) and “associates” who create anxiety ridden relationships (yellow lights) and criminal activities (red lights) that leads back to jail.
Through engagement with an ARRAY cohort participants were able to address their anxiety symptoms of defensiveness, irritability, nervousness, powerlessness and trouble thinking about anything other than their worry about surviving in prison. Thus, ARRAY provided participants with a vehicle for the reduction of anxiety through the group experience.

**Mapping technology.** ARRAY employs a unique mapping technology that participants used to visualize their affective, behavioral, and cognitive indicators, or yellow lights, of their anxiety. When yellow lights were recognized, participants were positioned to choose responses that would either accentuate or reduce their anxiety. Coping responses that increased their anxiety are unsafe because of the tendency of increased anxiety to also increase risk for criminal behavior (red lights). Alternatively, safe coping responses reduce anxiety and reduce relapse risk (green lights).

The mapping technology was installed during early ARRAY sessions and applied by the group members through active observation and analysis of group conversations about their common lived prison experience. During each group session one participant volunteered to map the group’s conversation onto the ARRAY 5-box schematic drawn on a whiteboard. The volunteer observed the group discussion of the session topic and placed affective, behavioral, and cognitive expressions of anxiety into the appropriate section of the schematic. The final session activity was the group’s analysis of the conversation map when participants discussed connections between their anxiety indicators and high and low risk relapse situations. This activity reinforced the use of the ARRAY model tools through the active mapping exercise as well as through the processing of the map itself. Through analysis of anxiety producing situations, as well as their reactions to those situations, group members gained insight into how
they managed their exposure and reaction to situations and led to the development of individual relapse prevention plans.

**Encouragement.** Positive feelings of self are antagonistic to anxiety and self-doubt. Thus, encouragement based on Adlerian and reality therapy principles was employed to build self-confidence in building re-entry plans. Encouragement was infused into the program in several ways. Throughout the sessions, facilitators acted as coaches and mentors to catch participants acting appropriately and approximating the knowledge, skills, and attitudes taught in ARRAY. In particular, during roleplays facilitators coached participants to identify anxiety indicators and recognize choice points for the selection of anxiety coping responses.

Additionally, sessions were initiated with a two-part exercise in which a volunteer read from a daily meditation book and asked participants for their brief reaction before participants introduced themselves with a positive affirmation about themselves or a peer. Sessions ended on a fun note with participants giving each other “fun” stickers that were earned for contributing to the session, reinforcing group inclusion and positive contributions. Both of these latter activities were important enough that participants requested them if the activities were not initiated by the facilitators. The final program activity was a session featuring a strength bombardment, which targeted each participant to receive positive feedback from peers about lessons learned in the production of their individualized relapse prevention plans. During this activity it was common for participants to provide each other with insightful and detailed descriptions of positive contributions to the group and personal characteristics.

**Reasons for sustained behavior.** While participants reported improvement in their anxiety, ARRAY did not significantly impact group means for anxiety from pre- to post-intervention. Some reasons that ARRAY was less effective for anxiety may be rooted in the
correctional environment. All of the common anxiety symptoms reported by prisoners promote self-preservation. Prisons are places where inhabitants must be hypervigilant and self-protective to the point of chronic sleep disturbance to avoid violence and exploitation (Freeman et al., 2000; D. J. James & Glaze, 2006; Reinhardt & Rogers, 1998). From participants’ reports and this author’s observation, there is little space or time when OMI can feel physically or emotionally safe, which reinforces a sense of powerlessness and lack of control that many OMI exhibit. Thus, in prison, being anxious is necessary for survival although it may permanently alter brain structures and negatively affect long-term functioning post-discharge (McEwen, Eiland, Hunter, & Miller, 2012) through the development of a continuous state of anxiety.

State anxiety may not be the only explanation for distress among OMI. The finding in this study that OMI experience higher levels of anxiety compared to the general prison population points to factors related to trait anxiety. Social Anxiety Disorder (SAD) is a common anxiety disorder with lifetime prevalence rates ranging between 7% and 12% of the general population (S. G. E. Hofmann, 2010). It was beyond the scope of this study to determine prevalence rates for SAD among study participants and further research is needed to understand differences in anxiety experienced by OMI and non-mentally ill prisoners.

One final aspect of ARRAY’s effect on the ability of OMI to manage anxiety is related to the instrument used to measure participants’ anxiety. It is possible that the instrument itself is useful for determining the presence of anxiety, without an ability to distinguish levels of specific symptoms of anxiety that can be used to target interventions. For instance, is SAD more prominent in OMI than in non-OMI? Future research may determine the symptom cluster reported by OMI and that measured by the EPS-C (Daigle et al., 2015) and help determine the
match between OMI symptoms and type of anxiety measured with the instrument, providing direction for counselors serving OMI.

**Depression**

The prevalence rate for depression among prisoners is 19.1% (Drapalski et al., 2009). Incarceration is associated with a 45% increase in the odds of experiencing lifetime major depression and more than doubles the odds of developing a 12-month dysthymic disorder (Schnittker et al., 2012). Consequently, treating prisoners’ depression effectively should increase the odds of positive post-discharge reintegration back into the community and decrease recidivism risk. A finding of this study is that the ARRAY-Pre- group members reported less depression than either the NORM or MOTIVATED groups and the ARRAY-Post-intervention group has significantly less depression than any of the other groups. However, the MATCH group had the lowest levels of depression out of all the pre-intervention groups.

The unexpected finding that the NORM group experiences higher levels of depression than the MATCH and ARRAY Pre- groups is difficult to explain. The differences do not seem related to the housing unit as the levels of depression reported by the MOTIVATED group are virtually identical to those of the NORM group; the NORM group is sampled from across the general prison population while the OMI samples are all drawn from prisoners who were resident on the designated Mental Health Unit at the time they were measured.

Visual review of the frequencies of the samples’ demographic variables (gender, sexual orientation, relationship status, ethnicity, age, and education) points to the general makeup of the NORM group to be male, heterosexual, unmarried, African American, between the age of 18 and 35 years old, and to have not completed high school. The OMI groups tend to generally be male, heterosexual, unmarried, White, older than 35 years old, and to have earned a general education
certificate or higher educational achievement. Further, as OMI have a higher number of previous incarcerations than non-OMI, it is reasonable to expect that OMI who participated in this study have more experience living in prison than those in the general population sample (James & Glaze, 2006). Higher age of OMI has been correlated with decreased depression and anxiety post-discharge (Shinkfield & Graffam, 2010). Further research is required to determine which differentiating factors are related to better adjustment and depression levels before differences among the comparison groups can be discussed.

The prevalence rate for any mental illness among all prisoners is approximately 34% (Steadman et al., 2009). Many prisoners who received behavioral health services prior to incarceration never receive behavioral healthcare while incarcerated (Blevins & Soderstrom, 2015; James & Glaze, 2006). OMI residing in the prison mental health unit have quick access to behavioral health services that are less available to the general inmate population. This service access gap may contribute to the elevated scores for the NORM group on the depression and self-esteem scales.

**Intervention effectiveness.** ARRAY is intended to promote the self-management of depression by program participants. The findings of this study indicated that ARRAY participation was associated with a significant reduction in depression; participation in the intervention produced a moderate effect ($d = .62$) on depression reduction. ARRAY participants’ depression improved enough so that they reported levels of distress lower than those in the general population.

**Reasons for change.** Reasons for change in participants’ depression levels can be attributed to the components of the ARRAY program. ARRAY uses a group counseling modality as the vehicle for change. Participants learn about their yellow warning lights, enhance their
coping skill menus, identify high relapse risk red lights, create wellness lifestyle green lights, encourage each other, and acquire prosocial coping skills through active practice. The use of ARRAY technologies in the counseling group environment provides participants tools that they can use to manage their depression-related cognitive, emotional, and behavioral reactions to their prison experiences.

**Yellow lights.** Research indicates common signs and symptoms of depression reported by prisoners include: psychomotor agitation, insomnia or hypersomnia, persistent anger or irritability, anhedonia, feelings of worthlessness or guilt, changes in sexual interest, changes in appetite, and diminished concentration; 13% of prisoners have tried to kill themselves in the past (James & Glaze, 2006). Depression-related yellow lights experienced by ARRAY participants were addressed through the program’s mapping technology. As participants processed their ARRAY 5-box maps, they began to recognize their yellow lights and the relationships between depression and antisocial behavior. With recognition of their yellow lights, participants practiced interrupting habitual cycles of unsafe coping to apply individual agency in the choice of coping responses that reduce depression and relapse risk. With a reduction in the amount of depression in their stress-vulnerability buckets (Brabban & Turkington, 2014) participants experienced a corresponding increase in the amount of energy available to direct toward reaching their potential self.

One example of this process is when a participant was denied discharge from the prison because of an accounting mistake made by the Department of Corrections when calculating the participant’s discharge eligibility date. In this case, the participant brought the situation to the group and processed ways to manage the situation. In the end the participant chose to accept
responsibility for his disappointment and to continue to engage in the prison community and not retreat into his relapse areas of isolation and consumption of sweets.

**Coping.** ARRAY participants were introduced to a number of safe coping skills for managing depression. Skills of basic grounding techniques, intentional breathing, perspective taking, seeking evidence for thinking errors, refusal skills, approach strategies to social interaction, and active listening were taught to participants. Participants were encouraged to take risks and try new behaviors in the group, treating the program as a sandbox where instant feedback and encouragement are readily available. The process of group-based learning allowed participants to adjust maladaptive relationship behaviors through practice changing relationships with themselves and with peers. Using ARRAY technologies of processing the group’s conversation maps and roleplays participants and facilitators identified and encouraged each other’s extant safe coping skills while transferring new coping skills to participants. Periodically during the ARRAY program participants were given opportunity to roleplay various skills. During roleplays, participants were coached through relapse situations by facilitators and peers who pointed out yellow lights and safe coping alternatives. Participants often discussed during ARRAY sessions behavioral and emotional changes they experienced with peers and family members when intentionally using newly acquired safe coping skills.

**Coping skill acquisition.** In addition to increasing connections and universality, the group process was a vehicle by which ARRAY participants enhanced their menu of coping skills. In ARRAY, learning to respond practically and prosocially, and to stop reacting antisocially, to situations is a key educational activity. Participants came to the program with small sets of ingrained coping mechanisms. Many of their coping habits were unsafe, increasing participants’ risk of incarceration and red light situations, including the exacerbation of relationships problems
and rule-breaking while incarcerated. Using the program’s mapping technology, participants were guided to build their menu of safe coping tools through the collective knowledge of the group and the active practice of new skills. Participants were encouraged to first, observe group facilitators and participants demonstrate skills; second, practice skills in the group; and third, practice skills with peers, facility staff, and family members. Participants often processed in group their experiences using newly acquired coping skills.

**Red lights.** ARRAY helped participants uncover their red lights and identify when they were at risk for the use of problem behaviors. Common depression-related red lights for ARRAY participants were isolation and withdrawal from the community, reliance on external resources, rumination, excessive guilt, self-denigration, substance use, and feeling disconnected from themselves or significant others, being anxious or fearful, and feeling powerless or helpless. The identification of their idiosyncratic red lights provided participants with additional insight into their yellow indicator lights and unsafe coping resources that could lead to depressive episodes.

**Green lights.** A unique feature of the ARRAY program is the creation of a wellness-based potential self. Participants used this feature to develop a prosocial alternative identity as a counter to their dominant antisocial identity. The creation of a potential self from a wellness perspective presented participants with a tool to balance the role of work and leisure alongside their relationships with themselves, their society, and how they find meaning in the world. ARRAY participants were able to verbalize the role of criminal and substance use behaviors as primary in their lives. A group exercise where participants drew on the whiteboard how they prioritized and connected the five areas of wellness for both their current, working self and for their new, positive potential self-provided participants with insight into the destructiveness of their behaviors and depressive cognitions. Processing the experience with peers often led to
increased motivation for behavioral change among participants as they gained insight into their idiosyncratic affective, behavioral, and cognitive yellow lights related to depressed mood and negative behavior patterns.

One hallmark of depression management is through the creation of social support systems that OMI can be actively involved in. Thus, for ARRAY participants, a green light is the extension of their prison social network among peers of different ages and racial backgrounds. In prison, social networks are crucial for survival; social networks often form around easily identifiable markers, like skin color, language, and home neighborhood. The democratic nature of ARRAY sessions provided opportunities for participants to safely cross social networks and expand interpersonal resources. A second way participants practiced green lights was through reallocation of their time. In prison there is little encouragement to develop positive prosocial activities. Watching television, sleeping, and contributing to the community are all equally rewarded by the facility staff. Upon their own initiative ARRAY participants would organize activities in their dorms to explore concepts taught in the program or request responsibility from facility staff for community activities. Some examples of available responsibilities included janitorial tasks in the dorms and building, managing the laundry, managing the lunch meal preparation, and working in administrative capacities in the treatment suite or the law library. Thus, ARRAY participants did voluntarily seek out activities to practice green lights of community building and meaningful occupation.

**Group process.** ARRAY was effective in managing depression partially due to the ability of counseling groups to instill hope and to allow group members to break out of their perceived isolation and disconnection from others (Bieling et al., 2006). Hope and connection with others are antidotes to the symptoms of depression, and are associated with lower levels risk
for self-harm and suicide among OMI (Gooding et al., 2015; Palmer & Connelly, 2005). As discussed above, the ARRAY group provided a vehicle for participants to reach out and safely build their social network. Throughout the data collection period for this study, it was common to see depressed group members recognized by their peers for their contributions to the group and subsequent increased group involvement by these same depressed participants.

**Mapping technology.** In addition to group process factors, ARRAY may be effective in reducing depressive symptoms through the active session practice of mapping internal distress indicators and applying safe coping skills with peers, facility staff, and family members. Mapping and skill development provided active learning opportunities participants used to develop personal agency and increased self-efficacy to create a relapse prevention that targets depressive symptomology. In addition, group discussion about mapped conversations provided opportunities for participants to practice behaviors challenging to maintenance of depressive symptoms.

**Reasons for sustained behavior.** While there is significant change in levels of depression reported by ARRAY participants, not every ARRAY participant was able to demonstrate achievement of a healthy mood. Some reasons for this lack of progress may include the invalidating environment of deprivation inherent in correctional settings. One of the primary means of punishment built into the correctional system is the removal of all but the necessities of life. Depriving prisoners of their freedoms and even simple luxuries is a philosophical choice made by correctional policymakers. For OMI, deprivation breeds depression. As one former correctional professional put it, “you’re in prison, you should be depressed” (M. Vannoy, personal communication, 8 September 2001).
**PTSD**

Trauma exposure, a near universal experience among OMI, can come from the experiences of both being a victim and a perpetrator of crime (Wolff et al., 2014); and, it is common for OMI to be both. Male prisoners report their top three traumas as witnessing death or serious injury, physical assault, and childhood sexual abuse (N. A. Miller & Najavits, 2012). Victims of violence often present with dissociation, substance abuse, depression, and PTSD (Ardino, 2012). Trauma sequelae include elevated suicide risk, psychosis, and sleep problems (Babson & Feldner, 2010; Blaauw et al., 2002; Saavedra & Álvarez, 2013). Increased levels of PTSD are found in offenders who felt regret or experienced guilty thoughts about their criminal actions (Crisford et al., 2008; Gray et al., 2003). A finding of this study was that ARRAY participants reported elevated levels of PTSD-related distress when compared to the general prison population.

**Intervention effectiveness.** ARRAY is intended to promote the self-management of PTSD by program participants. The findings of this study indicated that ARRAY participation was associated with a significant reduction in PTSD symptomology; participation in the intervention produced a moderate effect ($d = .40$) on PTSD reduction.

**Reasons for change.** Reasons for change in participants’ PTSD levels can be attributed to the components of the ARRAY program. ARRAY uses a group counseling modality inside a correctional facility as the vehicle for re-examination and reprocessing the narrative that OMI have used to explain the meaning of trauma in their lives. Participants learn about their yellow lights, enhance their coping skill menus, identify red lights, create green lights, encourage each other, and acquire prosocial coping skills through active practice.

**Yellow lights.** Research indicates the common signs and symptoms of PTSD reported by
prisoners include: hypervigilance, dissociation, sleep problems, nightmares and intrusive memories, derealization, suicidal thoughts, irritability, and attempts to minimize or avoid re-traumatization (Wolff et al., 2014). During ARRAY group sessions, participants learned to identify their trauma-related yellow lights and symptoms through the process of mapping their prison experiences as the group discussed specific ARRAY lessons. In each session, one participant volunteered to map the group’s conversations on the whiteboard. Facilitators coached participants to identify warning signs of PTSD as well as safe and unsafe coping strategies while mapping group conversations and processing session activities. At the close of the session the group analyzed the session map and discussed which PTSD indicators were identified and which coping responses were practiced during the session. A common theme during ARRAY discussions was the interactions between OMI and facility staff. Facility staff were portrayed by ARRAY participants as inconsistent in their application of rules and in their relations with inmates. These staff behaviors were interpreted by participants as contributing to the uncertainty and chaos of the prison experience. Discussion of ARRAY session maps often included identification of trauma-specific coping and communication skills helpful in the management of unequal power relationship dynamics. Through participation in ARRAY OMI began to recognize the impact of trauma in their lives and ways to manage their reactions to traumatic stimuli. With identification of their affective, behavioral, and cognitive stress reactions participants gained the agency to choose their responses to their trauma yellow indicator lights.

Coping. ARRAY participants were introduced to a number of safe coping skills for the management of their PTSD-related yellow indicator lights. Skills of basic grounding techniques, intentional breathing, perspective taking, seeking evidence for thinking errors, refusal skills, environmental management of stressors, seeking to control only what can be controlled, and
active listening were taught to participants. Through participants’ processing of conversation maps during each session menus of possible safe coping responses to PTSD symptoms were identified by participants as facilitators encouraged the use of these safe coping responses in session and in participants’ daily lives. Participants brought to ARRAY sessions for discussion changes they experienced with peers and family members when intentionally using safe coping skills.

Coping skill acquisition. The group process was a vehicle that ARRAY participants used to enhance their menu of coping skills. Cognitive-behavioral treatment groups provide safe places where group cohesiveness promotes optimism, group-based learning, emotional processing, shifts in self-focus, and modification of maladaptive interpersonal skills (Bieling et al., 2006). In ARRAY, learning to respond to yellow indicator lights with intentional use of safe PTSD coping skills is a key educational activity in the acquisition of prosocial coping skills. Trauma, for OMI, is “like water to fish” (Wolff, Huening, Shi, & Frueh, 2013) and many participants came to the program with small sets of ingrained coping mechanisms. Many of participants’ extant coping habits were unsafe and increased participants’ risk of incarceration and engaging in red light high-risk relapse situations. Using the program’s mapping technology, participants were guided to build their menu of safe PTSD coping tools through the collective knowledge of the group and the three stage process of self-instructional learning (Meichenbaum & Biemiller, 1998). Participants were encouraged to first, observe group facilitators and participants demonstrate skills; second, practice skills in the group; and third, practice skills with peers, facility staff, and family members. Participants often processed in ARRAY sessions their experiences using newly acquired coping skills during routine interactions with peers, facility staff, and family.
**Red lights.** OMI’s high relapse risk red lights are often associated with the eight criminogenic need risk factors presented in the Risk-Need-Responsivity model (R-N-R; Andrews & Bonta, 2010). Common PTSD-related red lights for ARRAY participants were substance use, violence toward self and others, associating with antisocial people, being in parts of town where they had used substances or committed crimes, and feeling disconnected from themselves or significant others, being anxious or fearful, and feeling powerless or helpless. ARRAY helped participants uncover their high relapse risk red lights and identify when they were at risk for use of behaviors associated with manifestation of PTSD symptoms. The identification of their idiosyncratic red lights provided participants with additional insight into their yellow warning lights and unsafe coping resources, so that participants reduced their relapse risk through the intentional practice of prosocial coping skills.

**Green lights.** A centerpiece of the ARRAY program is the creation of the potential self in which participants developed a prosocial alternative identity to counter their working antisocial identity. The creation of a potential self from a wellness perspective presented participants with a tool to balance the role of work and leisure alongside their relationships with themselves, their society, and how they find meaning in the world. ARRAY participants were able to verbalize the role of criminal and substance use behaviors as primary in their lives. The insight provided by a group exercise where participants drew their working and potential green lights on the whiteboard and processed their experiences with peers often led to increased motivation for change among participants.

**Group process.** Participation in ARRAY was, for many participants, a relief from the PTSD-related isolation and social disconnection OMI are subject to in much of their lives (R. K. James & Gilliland, 2013). The self-stigma experienced by prisoners is a risk factor for
recidivism (Ahmed & Ahmad, 2015). The process of engaging in a counseling group allows ARRAY participants to break their self-imposed isolation and process the emotions they have attached to their trauma and PTSD symptoms in a safe environment (Bieling et al., 2006; R. K. James & Gilliland, 2013).

When participants engaged in group with an ARRAY cohort they gradually began to dismantle the protections provided by their inmate suit. An example of how the group process supports healing from the effects of PTSD is the story of an ARRAY participant who entered the program with an attitude of bravado and a reputation for strong-arm tactics in the residential facility gradually and, after processing his history of childhood physical and sexual abuse, began to practice living with vulnerability and empathy for the experiences of others. In this way, ARRAY provided a vehicle for participants to use their group experience to reduce isolation-related anxiety and experience hope in their ability to manage their lives in such a way as to avoid re-incarceration.

**Mapping technology.** The ARRAY mapping technology is used by participants to visualize their affective, behavioral, and cognitive indicators, or yellow lights, of their PTSD-related symptoms. Participants learn to use a simple 5-box schematic to map out the relationship between their yellow lights and the consequences of coping skills they use to manage their yellow lights. Participants took turns mapping group conversations onto the whiteboard in the group room where ARRAY sessions were held. The group processed the map as a session activity, identifying PTSD-related yellow lights and safe coping responses available to members. Through analysis of the traumatic situations and their reactions to those situations group members gained insight into how they can more effectively manage their exposure and reaction
to situations. As participants practiced using the mapping activity during ARRAY sessions they began to gain confidence and use the model outside the program.

**Encouragement.** During this study the pilot ARRAY project was evaluated for its effect on participants’ mental illness. The program was also informally evaluated for the utility of program components. One component, encouragement, was infused into the program in several ways. Encouragement is a tool that promotes group cohesiveness and helps participants develop a sense of optimism and inclusion. A closely related tool, positive reinforcement, teaches participants how to participate in ARRAY sessions and helps affirm the risks participants take by being emotionally vulnerable and attempting new coping skills within the ARRAY session.

Several ARRAY activities promote encouragement and positive reinforcement. Sessions were initiated with an introduction in which participants were requested to identify a positive characteristic of themselves or a peer. Sessions ended with participants giving each other fun stickers earned for contributing to the group. This researcher observed adult male prisoners gleefully sharing SpongeBob and superhero stickers with each other. Both of these activities were important enough that participants requested them if the activities were not initiated by the facilitators. The final program activity was a strength bombardment, which targeted participants in turn to receive positive feedback from peers. During this activity it was common for participants to provide each other with insightful and detailed descriptions of positive contributions to the group and personal characteristics.

**Reasons for sustained behavior.** ARRAY was effective in the treatment of PTSD symptoms experienced by OMI. However, as with anxiety, some symptoms of PTSD are associated with survival in prison. Environmental factors associated with life in prison include the re-traumatizing nature of prison and the endless hours available for rumination. Personality
factors that may moderate the effectiveness of the intervention include typical behaviors of persons with PTSD like avoidance behaviors, persistent thinking errors and negative cognitions about self or the world, distorted blame surrounding the cause of the event or its consequences, persistent negative emotions related to the event, loss of interest in significant activities, alienation from others, and an inability to experience positive emotions (Tangney, Stuewig, & Hafez, 2011; Wolff et al., 2011).

Prison is an invalidating environment where disturbed caring and traumatic experiences are common contributing to the iatrogenic and re-traumatizing effects of incarceration (Dimeff et al., 2007; McCann et al., 2007; Sarlon et al., 2012). Consequently, the efforts required to live in prison contribute to the initiation and maintenance of PTSD. The pilot ARRAY program did address coping strategies useful in the management of environmental stimuli, although, it was not able to directly affect those environmental issues.

Self-Esteem

An unexpected finding of this study was that all of the OMI comparison groups reported higher self-esteem than the general population NORM group. As discussed in the section on depression, this finding may be related to the age and incarceration experience of OMI when compared with the general prison population and further research is required before an adequate understanding of the differences in self-esteem levels among the comparison groups can be discussed.

Intervention effectiveness. ARRAY is intended to promote the self-management of self-esteem by program participants. The findings of this study indicated that ARRAY participation was associated with a significant increase in self-esteem from pre- to post-intervention. The effect size ($d = .48$) for ARRAY participation on increased self-esteem was moderate.
**Reasons for change.** Reasons for change in participants’ self-esteem levels would seem attributable to the ARRAY program components of group counseling, mapping stress indicators, envisioning an alternative prosocial lifestyle, and practicing using coping skills that improve participants’ relationships with themselves, significant others, and their world.

**Yellow lights.** Common problematic self-esteem signs and symptoms experienced by ARRAY participants included: External locus of control, approval seeking, engaging in chaotic relationships, poor social skills, feelings of unworthiness, indecisiveness, having unreasonable expectations, and rigid and judgmental thinking. These self-esteem-related yellow lights were associated with participants’ social isolation, negative self-talk, and defensive interactions with peers and facility staff. Through interactions with peers during ARRAY sessions and the use of the program’s mapping technology participants began to recognize their yellow lights. Recognition of yellow lights provided participants with agency and the power to choose coping responses leading toward wellness or continued dis-eases.

**Coping.** ARRAY participants were introduced to a number of safe coping skills to promote a healthy self-esteem. The ARRAY program sorts coping skills into categories of safe and unsafe (Najavits, 2002). Safe skills are those that move participants closer to their wellness-based potential self-green lights and are associated with low recidivism risk. Unsafe skills are those are likely to lead participants into high recidivism risk red light situations. ARRAY provides participants with opportunities to learn safe coping skills based in the concept of self-compassion, the acceptance of self-doubt and adversity as part of being human (S. L. Marshall et al., 2015; Najavits, 2002). Additional safe coping skills include: countering negative self-talk with positive affirmations, mindfulness techniques, seeking evidence for thinking errors, seeking to control only what can be controlled, communication and relationship enhancements, and
active listening. Throughout the program facilitators coached participants in the use of safe coping skills.

**Coping skill acquisition.** The modality used in ARRAY to effect change in levels of self-esteem is the counseling group. Counseling groups promote coping skill acquisition through inclusion and group based learning (Bieling et al., 2006). Group based learning in ARRAY is bolstered by the use of self-instructional learning practices (Meichenbaum & Biemiller, 1998). Self-instructional learning is a process where the facilitator demonstrates a coping skill, coaches participants in the use of the skill, and eventually incorporates participants to teach the skill to others. ARRAY participants learned to recognize the yellow warning lights of others and respond to negative self-talk with positive self-talk and affirmations.

**Red lights.** ARRAY helps participants uncover their red relapse risk lights and identify when they are at risk for use of behaviors associated with incarceration. Common self-esteem-related red lights for ARRAY participants were isolation from others, indecision, unrealistic expectations about self and others, focus on self and unable to utilize empathy in relationships, overly critical self-examinations, defensiveness against criticism, external locus of control, and reduced ability to understand the situation in the moment. Through mapping out their reactions to environmental and relationship stimuli onto the ARRAY 5-box model participants were able to identify their idiosyncratic red lights. Processing with peers during group sessions provided participants with additional insight into their yellow lights and unsafe coping resources. In one instance, an ARRAY participant felt that he was unjustly punished for drug use in the facility. He reacted to this serious charge first with defensiveness and emotional reactions to perceived persecution by facility staff; after this initial interaction, this participant began to work with his
group to craft and practice a reasonable argument to the committee responsible for adjudicating the case. Ultimately, this participant presented a favorable case and avoided punishment.

**Green lights.** A centerpiece of the ARRAY program is the creation of the potential self, which participants use as a prosocial alternative identity against their dominant antisocial identity. The creation of a potential self from a wellness perspective presented participants with a tool to balance the role of work and leisure alongside their relationships with themselves, their society, and how they find meaning in the world. As ARRAY participants were able to verbalize an alternative lifestyle to their current working self clear choices were distinguished which participants good guide their choices. The insight provided by a group exercise where participants drew on the whiteboard how they prioritized and connected the five areas of wellness before processing the experience with peers often led to increased motivation for change among participants. Repeatedly throughout this study, participants found ways to express their personality and practice prosocial values. Often, participants began to take responsibility and jobs in the unit as a way to occupy their time and to change their daily routines.

**Group process.** Participation in ARRAY provided many participants a vehicle for belonging, growing hope, and practicing adaptive relationship skills. The ARRAY group made use of slow pace of prison life so that participants could continually practice using new coping skills and relationship tools. For example, as discussed above participants were provided with a safe emotional space where they were able to be vulnerable and not jail. When participants engaged in ARRAY they gradually began to dismantle their negative self-protection techniques and build emotional bonds with others. In this way, ARRAY participants engaged with each other in ways that are more honest, transparent, and aligned with positive personal values,
allowing participants to see their positive personal characteristics and experience increased self-esteem.

**Mapping technology.** ARRAY employs a unique mapping technology participants used to visualize their affective, behavioral, and cognitive indicators, or yellow lights, of their low self-esteem. This mapping technology is used by participants during group sessions to analyze common prison situations and the yellow warning lights and red recidivism risk lights presented by the analyzed situation. Through analysis of situations that challenge participants’ self-esteem group members gain insight into how they can manage their exposure and reaction to relapse risk situations. Based on insights gained through the mapping process participants learn when and how to choose safe coping skills and practice living their positive potential self.

**Encouragement.** Encouragement is an important component of the ARRAY program for the improvement of participants’ self-esteem. Self-esteem is enhanced through the ARRAY participants’ involvement with others in ways that validate participants’ self-concept and honor their experiences. In ARRAY sessions participants were coached by facilitators to identify positive characteristics of self and others and share their observations using owning statements. Sessions ended with participants giving each other fun stickers, which were awarded for additive contributions to the group. During the final strength bombardment participants received positive feedback from peers. Through formal ARRAY group activities, such as those described above, and informal interpersonal interactions participants were able to hear themselves described positively, for possibly the first time in their lives.

**Recidivism**

A main concern for counselors working with OMI is reducing the astronomical recidivism rate. Of the 95% of OMI who are released from prison after serving their sentence,
68% will be quickly rearrested or hospitalized (Cloyes et al., 2010; Durose et al., 2014; Lovell et al., 2002). OMI include a higher probability for multiple incarcerations as well as longer prison sentences (James & Glaze, 2006). OMI are more likely to be arrested than hospitalized due to the symptoms of their mental illness, and once incarcerated they are less likely to receive treatment (Morrissey et al., 2007). To the extent that ARRAY is able to reduce criminal recidivism the benefits for OMI, the correctional system, and the general society expand quickly.

Initial review of recidivism data for ARRAY participants indicated that of those who completed the program at least once and were discharged ($n = 12$), 11 (92%) have not been re-arrested (personal communication, C. Packard, 25 October 2015). The most recent recidivism data for ARRAY participants indicates that 58 men completed the ARRAY program. Of these, 13 (22%) remain incarcerated and 45 (78%) were discharged. Of the 45 who were discharged, a National Crime Information Center (NCIC; 2016) records report indicated that 40 (89%) have not been arrested following their discharge. Of the five who were re-arrested, one (20%) had his charges dismissed and was re-released from custody and four (80%) are incarcerated. The recidivism rate for ARRAY graduates following discharge from prison is 9% over a two-year period (M. Skirius, personal communication, 18 Mar 2016).

This researcher did have personal follow-up with two discharged ARRAY completers who participated in this study. One contacted this researcher after about a year post-discharge for assistance with substance use relapse prevention and coping with family and employment stressors with the aim to prevent a potential return to prison. He was provided with crisis intervention counseling, referral for psychiatric services, and help the participant link with natural supports. A second former ARRAY participant contacted this researcher for assistance coping with family stressors and linkage with community resources. He was provided with
supportive counseling and a letter of support to access a re-entry program. Thus, the preliminary recidivism reduction data for the pilot ARRAY program are optimistic.

**Limitations**

The ARRAY program is a research-based pilot intervention developed to treat mental illness experienced by prisoners housed in a mental health unit of a regional state correctional facility in the mid-southern region of the United States. Several limitations of this evaluation study are notable and presented below. Limitations are categorized by instrumentation, data, and program factors.

**Instrumentation Limitations**

A limitation of this study is the use of a measurement instrument that is in development. This study employed an early draft of the EPS-C (Daigle et al., 2015) which may be different from the final version of the instrument (D. Strohmer, personal communication, 16 November 2015). The EPS-C is being evaluated for validity and reliability by other researchers. However, this instrument does appear to detect the presence of emotional problems in prisoners and to differentiate between those prisoners who have mental illness and those who do not. A limitation of the EPS-C is that it currently lacks measurement scales that can be used to determine levels of emotional problems. A second limitation of the EPS-C is that it can be used to measure differences in OMI against a normative sample formed from a general correctional population. However, to this date the instrument has not been normed on a sample from the general population.

**Data Limitations**

A limitation in the data can be noticed in the MOTIVATED comparison group. Due to sample size, this group is comprised of all persons who initiated participation in the ARRAY
intervention but did not complete the program. Reasons for non-completion vary by individual and include institutional housing reassignment, discharge from the facility, and voluntary withdrawal from the program. Controlling for length of stay may provide insight into any differences between those who voluntarily withdrew from the program near the beginning and those who were administratively withdrawn after an extended participation.

**Program Limitations**

A limitation of the ARRAY program is participants’ tenure in group. ARRAY was designed to be delivered by masters and doctoral level counselors-in-training during an internship placement. As such, ARRAY was designed to be delivered within a 15-week academic term. ARRAY was delivered by people without prior training in ARRAY to OMI, who were also ARRAY-naïve. Consequently, ARRAY participants gained more from ARRAY when they increased their exposure to the program. Facilitators reported increased understanding of the program as their comfort with delivering ARRAY increased with experience. Examination of tenure for participants and facilitators may provide insights into simplifying the program or increasing the dosage.

A second program limitation is the counseling experience held by the facilitators. ARRAY was delivered by masters-level counselors-in-training as part of their field placement experience. Facilitators had no prior experience or training with the ARRAY program before they began to deliver the program with the target population. While the facilitators were supervised by doctoral level counselors with correctional experience there was a period during the early ARRAY sessions when group facilitators were learning both the ARRAY model and group counseling skills. This learning curve may have affected the ability of the program to efficiently reach program goals.
Future Research

Areas of future research related to the pilot ARRAY program fall into several categories. How this study compares to the benchmark meta-analyses of Landenberger and Lipsey (2005) and Morgan et al. (2012) is one area of research that will help determine the utility of ARRAY for correctional counselors. Other areas of future research are categorized below as programmatic, instrumentation, and recidivism reduction.

Programmatic

Future research related to this study includes exploration of the differences found among the comparison groups on each of the variables. Unexpectedly, the general population sample reported more depression and lower self-esteem than the OMI samples. Differences in the demographics of the comparison groups, especially for ethnicity, age, and educational achievement, were observed and further research is needed to explore the interactions between demographic variables and program variables. While the continued delivery of the program will raise the number of subjects included in future studies, there is also opportunity to explore how, these variables interact with each or add to an understanding of ARRAY and who may benefit from participation in the intervention is a question that might prove beneficial to explore.

ARRAY dosage research may be conducted to determine an effective amount of programming for participants. Some preliminary research has been done on this question, revealing that participants’ anxiety, depression, and somatic distress continue to decline following participation in a second 12-week iteration of the ARRAY program (Cox, Skirius, Lenz, James, & Packard, in review).

Findings of this study were that depression and low self-esteem were significantly relieved by participation in the pilot ARRAY program. While anxiety and PTSD were relieved,
but not to a statistically significant amount. Future ARRAY research may be conducted to determine how ARRAY can be improved to provide greater relief of participants’ anxiety and PTSD distress. There are three categories of general research questions for future ARRAY program development research. First, which specific program components should be modified to increase program effectiveness? Second, what specific symptoms are experienced by OMI and what instrumentation has the most utility for measuring those symptoms? Third, what is the significance of the prison environmental in the development and maintenance of emotional problems experienced by OMI?

**Instrumentation**

A second area for future research is related to the instrumentation used to evaluate ARRAY and to understand the symptoms experienced by participants. There are two areas related to instrumentation that could benefit from additional research. First are studies about the validation and reliability of the EPS-C (Daigle et al., 2015). The instrument can be used to diagnose the presence of emotional problems found in offender populations. The original Emotional Problems Scales (Prout & Strohmer, 1991) was found to determine risk for antisocial behaviors in psychiatric hospitals and correctional settings (Hogue et al., 2007; Lewis & Morrissey, 2010; Lindsay et al., 2008). However, future research is needed to determine both the amount of emotional problems present in an ARRAY participant and the amount of recidivism risk associated with the emotional problems found. In other words, can the EPS-C be used to determine correlations between intensity of a participants’ emotional problems and their risk of re-offending?

A second area of instrumentation-related research is studies about symptoms of mental illness experienced by OMI. Throughout this study it has become very clear that there is little
empirical evidence about the mental illness symptoms experienced by OMI and the prevalence of mental illness in prison. Studies that can provide information about prevalence of specific symptoms can double as good choices to understand specific symptoms to target with ARRAY. Instruments such as the Patient Health Questionnaire (Lowe, Kroenke, Herzog, & Grafe, 2004) and the Beck Hopelessness Scale (A. T. Beck, Weissman, Lester, & Trexler, 1974) are possible choices for isolating specific depressive symptoms experienced by ARRAY participants. To measure specific PTSD symptoms experienced by ARRAY participants the PTSD Checklist for DSM-5 (Weathers et al., 2013) could provide a good option.

**Recidivism Reduction**

A third area for future research is the continued examination of the effect of ARRAY on participant behavior. One area for research is the effect of ARRAY on facility resources. Research about institutional outcomes related to poor adjustment by OMI, including participants’ use of sick call, protective custody, number of sanctions and other individual level measures, is important to increase understanding of institutional efficiency. Public prisons operate on limited funding and increasing institutional efficiency can release scarce prison resources for other projects. Another area for recidivism research is related to the use of psychiatric and correctional resources in the community. There is a 70% chance that an individual OMI will recidivate within 3 years. Therefore, research outcomes related to psychiatric and criminal recidivism are important to pursue in the immediate term as well as at regular intervals up to three years post-discharge. Research into post-discharge behaviors of ARRAY participants can help with program development and with the development of interlocking systems between corrections and community mental health systems.
Implications

The Counseling Field

The number of OMI, and the fact that ninety-five percent of incarcerated OMI will return to their communities at some point (Carson & Golinelli, 2013), means that counselors will often interact with former prisoners. Community mental health providers are reluctant to serve OMI in the community due to stigma and a lack of cultural competence and preparation to meet the needs of discharged OMI. There are few texts that provide a comprehensive presentation of correctional mental health or the culture of corrections from the perspective of OMI.

Community mental health programming is often seen by OMI as inadequate (Lovell et al., 2002). ARRAY hold promise as an effective adjunctive intervention for counselors working with OMI. The program effected reductions in depression and increases in self-esteem in participants. Both of these emotional problems are related to criminal recidivism and restricted social functioning. Thus, symptom reductions may prove to have value for both participants and society. Counselors working with OMI lack the training specific to the needs of OMI. ARRAY offers a program that can be used by counselors with entry-level training in the use of cognitive-behavioral techniques.

The ARRAY program

This study examined the effect of participation in one 12-week experience of the ARRAY integrative group counseling program for prisoners with mental illness. The findings of non-significance on the related EPS-C scales of anxiety and posttraumatic stress disorder (PTSD) means that continued development of the program is indicated. There are several questions to explore.
First, is the program of great enough intensity to produce change on these scales? ARRAY was built to address multiple pre-discharge needs of OMI within a 12-session program. Because of the level of dysfunction and the length of time it has been practiced by OMI it is reasonable to expect that one 12-week program is insufficient to induce significant and lasting change. This idea is strengthened by this researcher’s observation that repeated exposure to the ARRAY program produces additional change.

Second, are there program components that can be modified, either through accentuation or compression of focus, to better serve participants? This study examined the effects of a pilot program for reducing the impact of mental illness in the daily lives of OMI. Several program components seemed to have a greater impact than others. For instance, the practice of using physical stickers as positive reinforcement for contributing to the session seemed well-received by participants. But there is little evidence about the contribution this program component adds to the overall ARRAY model. Additional research into the mechanics of contingency management is one example of an area where future research could strengthen ARRAY.

Third, is the EPS-C (Daigle et al., 2015) the best instrument for measuring anxiety and PTSD in OMI? The EPS-C is currently able to detect the presence of mental illness among OMI. However, having the ability to detect specific symptoms of mental illness would provide researchers with additional information about symptom prevalence as well as what symptoms may be relieved by ARRAY participation. Therefore, the continued development of the EPS-C is encouraged by this researcher. While the EPS-C is developed, it may be that instruments which measure specific symptoms, such as the Patient Health Questionnaire (Lowe et al., 2004), the Beck Hopelessness Scale (A. T. Beck et al., 1974), and the PTSD Checklist for DSM-5 (Weathers et al., 2013) could provide additional participant detail.
Fourth, are there environmental factors outside the control of ARRAY that contribute to either the elevation of scores or resistance to symptom mediation? The prison environment has an iatrogenic effect on the development of long-term mental illness and dysfunction. Researchers and policy makers have begun to understand the importance of trauma-informed policies in residential settings. A finding of this study is that rehabilitative programming for OMI does not routinely incorporate the research on what works in recidivism reduction programs. Therefore, continued exploration of the environmental factors found in correctional settings may produce findings that can support prisons in their mission of reducing future crime.

Consumers

The findings of this study have several potential implications for ARRAY participants. The first of these comes from the findings of improvement in participants’ mental health and increased participant adjustment to the prison environment. The second is related to decreased risk for rapid re-arrest post-discharge. ARRAY provides an accessible model for OMI to use in making change. The model is flexible enough for participants to use in a variety of situations and simple enough to be remembered even when participants find themselves in high risk relapse situations. Therefore, participation in the ARRAY program has benefits for those who engage in the program.

Conclusion

The Adult Recidivism Reduction Alternatives (ARRAY) program is one of the few research-supported protocols available for counselors to use with persons with mental illness who are involved with the criminal justice system (OMI). ARRAY can also be used in pre-sentencing and post-discharge venues to treat OMI and to support the goals of the criminal justice system.
The pilot ARRAY integrative group counseling program for the treatment of mental illness experienced by prisoners holds promise as an effective evidence-supported model. The findings of this study point to reduced distress from the symptoms of depression, PTSD, and low self-esteem experienced by OMI. ARRAY also seems to have an effect on criminal recidivism. Both of these findings point to decreased institutional and societal costs related to crime and punishment. While ARRAY remains in development, the foundations of the program are in place and present a number of opportunities for furthering the correctional research literature on what works in the preparation of prisoners with mental illness for a satisfying prosocial experience post-discharge.
References


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Appendix 1

Institutional Review Board Approval (#3171)
IRB Approval 3171

2 messages

Institutional Review Board <irb@memphis.edu> Wed, Jul 15, 2015 at 4:10 PM
To: "Robert Michael Cox (rmcox1)" <rmcox1@memphis.edu>, "Richard K James (rjames)" <rjames@memphis.edu>

Hello,

The University of Memphis Institutional Review Board, FWA00006815, has reviewed and approved your submission in accordance with all applicable statutes and regulations as well as ethical principles.

PI NAME: Robert Cox
CO-PI:
PROJECT TITLE: A Cognitive-behavioral Intervention to Reduce Recidivism in Offenders with Mental Illness
FACULTY ADVISOR NAME (if applicable): Richard James

IRB ID: #3171
APPROVAL DATE: 7/15/2015
EXPIRATION DATE: 7/19/2016
LEVEL OF REVIEW: Full Board

Please Note: Modifications do not extend the expiration of the original approval

Approval of this project is given with the following obligations:

1. If this IRB approval has an expiration date, an approved renewal must be in effect to continue the project prior to that date. If approval is not obtained, the human consent form(s) and recruiting material(s) are no longer valid and any research activities involving human subjects must stop.

2. When the project is finished or terminated, a completion form must be completed and sent to the board.

3. No change may be made in the approved protocol without prior board approval, whether the approved protocol was reviewed at the Exempt, Expedited or Full Board level.

4. Exempt approval are considered to have no expiration date and no further review is necessary unless the protocol needs modification.

Approval of this project is given with the following special obligations:

Thank you,

James P. Whelan, Ph.D.
Institutional Review Board Chair
The University of Memphis.

Note: Review outcomes will be communicated to the email address on file. This email should be considered an official communication from the UM IRB. Consent Forms are no longer being stamped as well. Please contact the IRB at IRB@memphis.edu if a letter on IRB letterhead is required.
1. Basic Information (See Subsequent Event Guidelines Section 1)

1.a: Lead Investigator

U00454709  RmCox1@memphis.edu
Banner U#  Email Address*  Academic Unit (or specify below)*
Robert m  Cox  CEPR
First Name*  Last Name*  Academic Unit (if not selected above)
3133153  04/18/2017
Investigator Type*  CITI Completion Report ID #*  CITI Expiration Date*

1.b: Contact Person (if different from lead investigator)

Contact Banner U#  Contact Email

Contact First Name  Contact Last Name

1.c: Faculty Advisor (this section required for students only)

rjames@memphis.edu  9573628
Advisor Banner U#  Advisor Email  CITI Completion Report ID #*
Richard  James
Advisor First Name  Advisor Last Name  CITI Expiration Date

1.d: Study Information

Study Title:* A Cognitive-Behavioral Intervention to Reduce Recidivism in Offenders with Mental Illness
Anticipated Number of Subjects:* 100  Externally Funded?*  ☑Yes  ☐No

Co-Investigators:

Submission Type: *

1.e: Affirmations

By checking the box below, Investigator affirms the following:

1) The research will not be initiated until written approval is secured from the IRB.
2) I will conduct this study as described in the approved study. If any changes are anticipated, I will contact the IRB staff prior to implementing the changes and request the appropriate form or procedure. I will not implement the changes until I receive approval from the IRB or its staff.
3) I will contact the IRB staff immediately if any of the following events occur: unanticipated problems involving risks to subjects, study deviations, and findings during the study that would affect the risks or benefits of participation.
4) If you are a student, you also affirm your understanding that approval of your Faculty Advisor is required before this document is submitted to IRB.

Investigator affirms:*  ☑Yes  ☐No  Date Affirmed: 29 Dec 2013
By checking the box below, Faculty Advisor affirms the following (required for graduate and undergraduate student research):
1) I have reviewed and approved the research plan of the student(s).
2) I assume responsibility for ensuring that the student(s) conducting research are aware of their responsibilities as researchers.
3) The IRB will be immediately informed in the event of unanticipated problems involving risks to subjects, study deviations, or findings during the study that would affect the risks or benefits of participation.
4) I will submit the reviewed study to irb@memphis.edu on behalf of my student.

Faculty Advisor affirms: ☑Yes ☐No Date Affirmed: 1-16-2014
CITI #9573628 Richard K. James Ph.D.
*Required fields
2. **Purpose of the Study** (See Initial Review Guidelines Section 2)

The purpose of this study is to pilot a cognitive-behavioral intervention designed to reduce criminogenic and psychiatric recidivism among adults (women and men) with mental illness involved in the criminal justice system. "It is commonly accepted that persons with mental illness (PMI) are over-represented in the criminal justice system" (Morgan et al., 2012, p. 37). Prevalence rates for Serious and Persistent Mental Illness among inmates are 14.5% for males and 31% for females (Steadman, Osher, Robbins, Case, & Samuels, 2009) versus the 12-month prevalence of serious mental illness estimate of 5.8% among adults in the general population (Congressional Research Service, 2013, p. 2). The United States Bureau of Justice Statistics released a 2006 report linking mental illness, violent and aggressive behavior, and recidivism. However, prisons are philosophically and infrastructurally under-prepared to meet the needs of PMI; the American criminal justice system was built to promote public safety. The first 50 years of recidivism reduction research was plagued by limited research and poor definitions. An environment of frustration with available treatment combined with political tension to reduce crime swung policy away from attempted cures and rehabilitation to models constructed with the idea that “nothing works” in recidivism reduction programming (Andrews & Bonta, 2010, p. 351). However, “prisoners have a constitutional right to adequate health care, including mental health treatment” (Steadman et al., 2009, p. 761) and public media outcries are becoming louder for appropriate criminal justice responses for Offenders with Mental Illness (OMI). Synder (2007) laments a critical lack of evidence-supported interventions that can break the recidivistic cycle common in the criminal justice system. Landenberger and Lipsey’s (2005)
foundational meta-analysis identified components of cognitive-behavioral (CBT) programs that work. “However, much remains to be learned about the optimal configuration of CBT and the conditions under which it is most effective” (Landenberger & Lipsey, 2005, p. 472). This study will test an intervention built upon the lessons learned from meta-analyses and help inform the literature on “what works” in recidivism reduction with OMI.

Presently, no psychotherapeutic intervention is being done with the women prisoners in the Shelby County Department of Corrections (SCDOC). Psychotherapy groups for incarcerated women that focus on trauma have shown some success in symptom reduction (Karlsson, Bridges, Bell, & Petretic, 2014; Sacks, McKendrick, & Hamilton, 2012). However, they are not without tactical and strategic implementation problems (Liebman, Burnette, Raimondi, Nichols-Hadeed, Merle, & Cerulli, 2014; Paquin, Kivlighan, & Drogosz, 2013). The latest available incarceration statistics indicate a substantial increase (31%) in incarcerated women from 2000-2011 (Steadman et al., 2009). Female incarcerates' experience elevated rates of interpersonal trauma, substance dependence, and associated symptoms of posttraumatic stress disorder (Fedock, Fries, & Kubiak, 2013; Friestad, Åse-Bente, & Kjelsberg, 2014; Green, Miranda, Daroowalla, & Siddique, 2005; James & Glaze, 2006; Lynch, DeHart, Belknap, & Green 2012; Lynch, Fritch, & Heath, 2012; Steadman et al, 2009). From this standpoint they very much resemble the mentally ill men that we have been working with successfully in the ARRAY group (Cox, Lenz, & James, in press) at the SCDOC and it is for that reason we believe that transporting the ARRAY program to the women's unit may prove efficacious.

3. Methods and Procedures (See Initial Review Guidelines Section 3)
This study will use quantitative research methods to measure attitudinal change in participants of a recidivism reduction intervention. Study participants will be adult Offenders with Mental Illness (OMI) who are currently incarcerated in a county prison and identified to be at high risk for re-arrest. Risk is determined by history of multiple incarcerations. This study will test the efficacy of a pilot 12-week, 12-session cognitive-behavioral group intervention to reduce criminogenic and psychiatric recidivism. The intervention is a generic cognitive-behavioral manual (See Appendix A) specifically created for this project using evidence-supported materials from the literature of treatment programs for use in correctional settings. Both men’s and women’s treatment groups will be conducted during the initial study period; each group will have a maximum of 20 participants.

**Intervention.** The intervention, based on the benchmark meta-analytical findings of Landenberger and Lipsey (2005), is a cognitive-behavioral treatment (CBT) approach (See Appendix A for the intervention protocol). “Cognitive-behavioral therapy is one of the most extensively researched forms of psychotherapy” (Butler, Chapman, Forman, & Beck, 2006, p. 17). Cognitive-behavioral theory is built on three assumptions: “1. Cognitive activity affects behavior. 2. Cognitive activity may be monitored and altered. 3. Desired behavior change may be effected through cognitive change” (Dobson & Davoix, 2010, p. 4). “Several clinical trials have pointed toward CBT’s long-term effectiveness and prevention of relapse” (Butler et al., p. 18) compared with psychopharmacology.

The elements found in the research literature, and incorporated into this program, are briefly defined as follows in a meta-analysis by Landenberger and Lipsey, (2005). Effect sizes from Table 3 (pp. 463-464) are in parentheses:
Cognitive skills: Training on general thinking and decision-making skills such as to stop and think before acting, generate alternative solutions, evaluate consequences, and make decisions about appropriate behavior (0.02);

Cognitive restructuring: Activities and exercises aimed at recognizing and modifying the distortions and errors that characterize criminogenic thinking (0.27);

Interpersonal problem solving: Training in problem-solving skills for dealing with interpersonal conflict and peer pressure (0.04);

Social skills: Training in prosocial behaviors, interpreting social cues, taking other persons' feelings into account, and the like (0.02);

Anger control: Training in techniques for identifying triggers and cues that arouse anger and maintaining self-control (0.32);

Moral reasoning: Activities designed to improve the ability to reason about right and wrong behavior and raise the level of moral development (0.11);

Victim impact: Activities aimed and getting offenders to consider the impact of their behavior on their victims (-0.14);

Substance abuse: Application of any of the typical CBT techniques specifically to the issue of substance abuse (0.11);

Behavior modification: Behavioral contracts and/or reward and penalty schemes designed to reinforce appropriate behavior (0.03);

Relapse prevention: Training on strategies to recognize and cope with high-risk situations and halt the relapse cycle before lapses turn into full relapses (0.12);
Individual attention: Any individualized one-on-one treatment element that supplements CBT group sessions, e.g., individual counseling. (0.39). (Landenberger & Lipsey, 2005, pp. 466-467)

Participants in this project are self-referred. The Lead Investigators masters and doctoral students on field placement and the director of the Shelby County Division of Corrections Mental Health Unit (MHU) will present the study to potential participants. Each morning inmates have a community dorm meeting. The study will be presented during community meeting when interested inmates will be directed to sign up for individual screening sessions where they can learn more about the study and decide if they want to sign up for the group. All the eligible participants will be interviewed by the principal investigators and master’s and doctoral level clinical mental health counseling field placement students under their supervision. Those inmates that meet the inclusionary criteria (See below Section 6d) will be invited to participate in the intervention. Structured interviews will be conducted using a standardized set of questions (Appendix B) developed specifically for this project for both men and women.

Prior to inclusion in the study eligible subjects will be informed of the purpose of the intervention and the study as well as potential benefits by the facility staff. A pool of potential subjects will be presented to the principal investigators comprised of those who wish to learn more about participation. Potential subjects will participate in an initial interview with the principal investigators and clinical mental health counseling students as they are available. During this interview several tasks will be accomplished. The investigators will describe the study, potential benefits and risks, conduct a structured interview assessment to determine motivation for participation and motivation for change, gather information to be used to
determine risk for relapse, and assess if the subject meets the inclusionary criteria for the project. No more than twenty inmates will be selected for each group sequence. Attrition rates from previous groups, indicate that this is a workable number and will provide each group member with quality time to develop their Relapse Behavior Prevention plans.

Determination for invitation to participate will be made by ranking interviewees according to meeting the inclusionary criteria without also meeting one or more exclusionary criterion. Those with higher relapse risk will be given priority for participation. Relapse risk is determined by number of convictions carried by participants. During the initial interview participants will be asked if there is anyone they would not want to be in a group with; every effort will be made by the intervention staff to separate persons who request such separation.

**Instrumentation.** We will use pre- and post-test assessments to measure change from the intervention. The Emotional Problems Scale-Self-Report Instrument-Corrections (EPS-SRI-C), a 194-question instrument designed to predict aggressive and anti-social behaviors associated with criminal behavior, will be administered as a pre- and post-test. The EPS-SRI-C is a variation of the Emotional Problems Scales (Prout & Strohmer, 1991) and is currently in development for use in correctional settings. "The Emotional Problem Scales (EPS) were developed by Prout and Strohmer (1991) to assess psychological, emotional and behavioral problems in individuals with mild to borderline ID [Intellectual Disability]" (Hogue et al., 2007, p. 779). The EPS-SRI-C is a pencil and paper instrument that requires less than 30 min to administer. It is written at a third grade reading level and may be taken independently by study subjects or answered by subjects while an administrator reads the questions aloud. We will
allow subjects to answer the assessment questions independently while intervention staff is available to respond to subjects' needs.

At multiple points throughout the study we will administer the three questionnaire set of surveys known as the Patient Health Questionnaire (PHQ). The PHQ survey set includes: the 15-question depression screen, PHQ-15, the 9-question somatic complaint screen, PHQ-9, and the 7-question anxiety screen, GAD-7. The PHQ set will be used to track subjective distress at baseline, throughout the intervention, and after the intervention ends. The PHQ-9 is able to "to detect depression outcome and changes over time" (Löwe, Kroenke, Herzog, & Gräfe, 2004). "The PHQ-9, GAD-7 and PHQ-15 are brief well-validated measures for detecting and monitoring depression, anxiety and somatization" (Kroenke, Spitzer, Williams, & Löwe, 2010). The PHQ will be administered every other day for three administrations prior to start-up of the group to obtain a pre-intervention baseline. After completion of each group session the PHQ will be administered to monitor participant responses during the intervention. Finally, a post-intervention baseline of three administrations on alternating days over a one-week period will be used to determine if significant effects have occurred due to the intervention.

Two trauma screening instruments will also be administered. The standard self-report version of the Life Events Checklist for DSM-5 (LEC-5) (Weathers et al., 2013) is a 17-item self-report instrument that enumerates stressful events that have been experienced, witnessed, or learned about by participants. Men are more likely to witness violent events while women are more likely to experience interpersonal violence (Miller & Najavits, 2012) The LEC-5 will allow the investigators to appraise the variety of traumatic events OMI have personally experienced and to tailor the ARRAY group sessions to meet the different needs of any specific
treatment group. The Abbreviated PCL-C, a shortened version of the PTSD Checklist – Civilian version (PCL-C; Lang & Stein, 2005) is an inventory of symptoms associated with Posttraumatic Stress Disorder and the severity of those symptoms over the previous month. Severity of symptoms is associated with the risk of re-offense both in prison and upon discharge. Together these instruments will give the research team information about the traumatic experiences of OMI and the effect of those experiences on current personal functioning.

**Procedure.** Those who volunteer to participate will be admitted to a quasi-experimental treatment group. All groups will receive the same treatment intervention. Prior to the initial treatment intervention session participants will be given the opportunity to obtain full informed consent and to ask questions about the intervention. Once participants have agreed to engage in the intervention by signing the informed consent form the assessment instruments will be administered. Prior to the first intervention session and following agreement to the informed consent document, the EPS-SRI-C, the LEC-5, and the Abbreviated- PLC-C will be administered as a pre-intervention baseline measurement. Following the final weekly intervention session, the EPS-SRI-C, and the Abbreviated- PLC-C will be administered as post-intervention assessments. The LEC-5 will only be administered at pre-test because additional significant traumatic events are not expected during the intervention time period. Participants will be administered the PHQ surveys on alternating days for at least one week prior to initiation of the intervention. Following each group meeting the PHQ surveys will be administered. Finally, the PHQ surveys will also be administered on alternating days for at least one week after the concluding group intervention session.

4. Secondary Analysis of Existing Data (See Initial Review Guidelines Section 4)
This is a quantitative study collecting pre- and post-test data on inmates with mental illness who voluntarily participate in the study and complete the 12-session Applied Recidivism Reduction Alternatives (ARRAY) group. It will not use existing data but generate its own data sets.

| 5. Investigator(s) Qualifications (See Initial Review Guidelines Section 5) |

The project is under the direction of Robert m Cox, a Doctor of Education student in the Counseling, Educational Psychology, and Research Department at The University of Memphis. Mr. Cox earned a master’s degree in Community Counseling in 1998 at Appalachian State University. He is a Licensed Professional Counselor with Mental Health Service Provider certification, a Licensed Clinical Addictions Specialist, and a Certified Clinical Mental Health Counselor.

Mr. Cox will be supervised by Richard James, PhD., the co-investigator, a professor in The University of Memphis Department of Counseling, Educational Psychology and Research. Dr. James is a National Board Certified, Tennessee Licensed Professional Counselor with Mental Health Service Provider certification and a Licensed Psychologist.

The Shelby County Division of Corrections Mental Health Unit operates under the direction of Mr. Chris Packard, a Nationally Certified Counselor, who has over 5 years of experience on the MHU.

Various master’s and doctoral degree mental health counseling students who are doing field placements in their degree program at the SCDOC may be engaged in running the groups as part of their field experience and will be under the supervision of Dr. James during the course of
the research and Mr. Chris Packard as their field supervisor. Supervision modalities to be employed during the study are co-therapy and live supervision; audio and video recordings of sessions are prohibited in the facility due to the prison administrations concerns about potential confidentiality and security violations.

6. Human Subjects (See Initial Review Guidelines Section 6)

a. Characteristics

Participants will be adult residents of the Shelby County Division of Prisons Mental Health Unit that is based at the Shelby County Corrections Center. They are diagnosed as having a mental illness as defined by the Diagnostic and Statistical Manual (American Psychiatric Association, 2013). Many have Serious and Persistent Mental Illness (SPMI), a set of diagnoses that include the psychotic disorders, mood disorders, anxiety disorders, and trauma-related disorders (Carey & Carey, 1999); others also have co-occurring substance use disorders.

b. Vulnerable Populations

The study will be conducted with adult men and women prisoners of the Shelby County Division of Corrections Mental Health Unit.

c. Pre-existing relationship to subject pool

The authors do have a pre-existing relationship with the male subject pool due to a yearlong experience conducting research on the ARRAY program on the Mental Health Unit during the 2013-2015 time frame. However, no personal relationship currently or previously has, to the researchers’ knowledge, existed with the subject population.
d. **Subject Selection**

Participants in this project are self-referred following a question and answer session during the routine morning community meeting in the facility as presented in Section 7, Recruitment. All the eligible participants will be interviewed by the principal investigators. Those that meet the inclusionary criteria will be invited to participate in the intervention. Structured interviews will be conducted using a standardized set of questions (attached Appendix B) developed specifically for this project. These interviews will last about one hour.

Inclusion Criteria for participation in the group will be:

1. Adult inmates at the SCDOC currently on the MHU or in the women's facility.
2. History of criminal recidivism.
3. Planned discharge date greater than 5 months and less than 12 months in the future.
4. Compliant with treatment recommendations.
5. Stable on medications.
6. Motivation for change (stated desire to break their pattern of criminal behavior and incarceration).
7. Stated desire to participate.

Exclusion Criteria include the following:

1. Medical conditions that preclude able to participate in a group setting for up to 2 hours at a time.
2. Active psychosis.
3. Inability to participate intellectually due to developmental or language barriers.
4. Display of behaviors disruptive to the group process.

5. Participation in behaviors that are dangerous to self or others.

6. Under the age of 18 years old.

7. Stated desire to not participate.

e. *Anticipated Number of Subjects*

   It is estimated that 100 persons will participate in the intervention by the time the study is completed with an approximately equal division between men and women.

7. **Recruitment** (See Initial Review Guidelines Section 7)

    Recruitment of potential subjects will be conducted by the Lead Investigators, masters and doctoral students in their field placement, and by Mr. Packard, director of the SCDOC MHU and the women’s unit, where the study will be conducted. During the recruitment period (approximately three weeks before the beginning of the study) the recruiters will go to the morning community meeting on each of the MHU dorms and the women's housing unit to inform residents of the study, the study goals and methods, answer inmates' questions, and create a list of interested persons. Interested persons will be directed to sign up for an individual screening appointment. Mr. Packard may identify additional inmates that may benefit from the ARRAY program to be added to the initial interest list. The pool of potential participants will be interviewed by the lead investigator or faculty supervisor to screen for eligibility and to answer any questions the interviewee may have about the project. Those who screen into the program will give their informed consent prior to participation in the study.
Script: “Good Morning _____. If you are scheduled for discharge within the next 12 months and have been incarcerated more than once, I wanted to let you know about a research study that is being conducted by the University of Memphis Department of Counseling, Educational Psychology and Research. The program is a 12-week group that might help you stay out of jail by creating a relapse prevention plan and learning some new skills. Participation is voluntary; there are no benefits regarding reduction of your sentence for joining. However, you might learn some skills that can keep you out of prison. If you are interested, you can sign up and we will talk with you further about participation.”

8. Subject Payment (See Initial Review Guidelines Section 8)

Subjects will receive no payment, sentence reduction, or other compensation for participation. They will be told prior to enrollment that participation will not affect release status nor may it be used to influence parole board decisions.

9. Potential Risks (See Initial Review Guidelines Section 9)

To the best of our knowledge, there is only minimal risk associated with the project. Risk of discomfort due to thinking and feeling in, often, new ways, especially about unsafe and aggressive behaviors, is to be expected in psychological treatment. There is always the risk of loss of confidentiality in a group setting as the facilitators are not able to control speech outside the intervention space (e.g., the group room).

Participants will be instructed during the informed consent period, and periodically throughout the study period, that if they become emotionally uncomfortable the lead investigator,
Some people have experienced greater self-awareness, better inter-personal relationships, and enhanced self-efficacy and self-confidence as a result of participating in groups like this. Our preliminary results indicate that participants experience relief from symptoms of anxiety and depression as a result of participation in the ARRAY program (Cox, Lenz, & James, in press) and that those who complete the program have a reduced risk for re-offense. This project is designed to increase understanding of what works in recidivism reduction for an underserved population (offenders with mental illness). It is expected that lessons learned will provide insights useful in the compilation of evidence-supported interventions and take a step toward reducing the dearth of manualized programs (Morgan et al., 2012; Snyder, 2007) currently available to treatment providers.

11. Assessment (See Initial Review Guidelines Section 11)

It is the belief of the research team that the benefits of this study outweigh its risks. There is risk that the subjects will experience emotional distress through participation; distress is common in cognitive-behavioral treatment due to the introspective nature of the treatment and the fact that participants are acquiring new skills. This risk is controlled by the availability of emotional support and access to professional mental health counselors in the SCDOC MHU. At least two levels of benefit are associated with this study. Potential benefits to the participant include greater self-knowledge, increased inter-personal skills, and the development of a relapse
prevention plan for use upon discharge. Benefits to the field include increased understanding of how to devise cognitive-behavioral interventions for Offenders with Mental Illness and a honing of what works in recidivism reduction programming. With low risk of harm to participants and the potential for benefit to participants and to society this study is valuable.

12. Privacy (See Initial Review Guidelines Section 12)

The Lead Investigators will protect participant privacy by conducting all interactions with subjects in their residential unit. Individual sessions with participants will be conducted behind closed doors; group sessions will be conducted in a multi-purpose room away from the general inmate population areas. Access to protected health information about subjects will be on a need-to-know basis. The Lead Investigators do not have access to prison records about individual inmates; facility staff does not have access to assessment protocols for individual participants. Transmittal of assessment outcome data will be on a group basis without individually identifiable records. Research data will remain in the control of the research team. Participants’ names will be coded with an alphanumeric identifier and separated from connected records to protect subject's confidentiality. Paper records will be stored in a locked container in Dr. James’ office at the University of Memphis; electronic records will be maintained behind password protection. Sharing of de-identified and coded data will be password protected; data will be encrypted as needed to maintain protection. The research team has been instructed in the protection of patient data under the federal HIPPA rules.
13. Confidentiality (See Initial Review Guidelines Section 13)

The confidentiality of subject records is extremely important to the research team. Therefore, every effort will be taken to protect those records. Research data and records will be stored in a locked file cabinet maintained by the Faculty Supervisor at The University of Memphis Counseling, Educational Psychology, and Research department. Participants’ names will be coded with an alphanumerical identifier and separated from connected records to protect subject's confidentiality. Electronic records storage will be password protected and stored on solid state digital media (e.g., a flash drive) secured by either Mr. Cox or Dr. James. When records containing protected information must be transported they will be secured under lock by the lead investigators.

Confidentiality within the groups cannot be guaranteed by the fact that members are privy to each other’s' self-disclosure and members will be told so. However, it has been our experience that inmates have high integrity when it comes to keeping information in the group secure. Participants will be informed that the group leaders will not be able to keep confidentiality if participants threaten harm to themselves or others, or disclose that they are breaking prison rules or are planning to escape.

14. Collaboration, Engagement & Sponsor Relationships
(See Initial Review Guidelines Section 14)

This study is conducted in collaboration with the Shelby County Division of Corrections. A current letter of support from the prison director is attached as Appendix C.
All data collected is the property of the research team. Participation and attendance data will be shared with the director of the SCDOC MHU for purposes of prison security.

15. Sponsor Proposal (See Initial Review Guidelines Section 15)

N/A

16. Informed Consent (See Initial Review Guidelines Section 16)

Prior to initiation of the intervention each invited participant will have an opportunity to give informed consent to participate in the study. The lead investigators will review the informed consent document with eligible participants. Eligible participants will have opportunity to ask questions about the study and how it may affect them. A copy of the signed Informed Consent document will be available upon participant request following their matriculation into the study.

Our Informed Consent document is attached as Appendix D.

Submit this completed form via email to irb@memphis.edu
Appendix 2

Letters of Support
TO:    Doctor Richard James  
       Doctor Douglas Strohmer  
       Doctor Chris Ann Schiro – Geist  

University of Memphis  
Department of Counseling, Educational Psychology  
and Research  

FROM:  Director William Gupton  
Shelby County Division of Corrections  

DATE:   May 8, 2015  

SUBJECT: Approval of Research Endeavors for Women’s Trauma and Canine Therapy,  
EPS-C data collection and continuation of Array Group Program for Inmates  

This memorandum of agreement indicates the Shelby County Division of Corrections’ approval  
and cooperation in conducting pilot group research programs of the Seeking Safety Trauma  
program for women and the Canine Therapy program for women. It also renews our memorandum  
of agreement with the continuing research for EPS-C and Array group program for men and  
women inmates.
Appendix 3

Structured Assessment
Screening Questions

Name: _________________________________ DOB: _______________ Age: _____

Race: ____________ Highest Grade completed: _________ Most Recent Zip Code ______

Date of most recent conviction: _______________

Length of sentence: __________ Expected Discharge Date: ____________ Paroled ? _____

# of previous arrests: _______ convictions: ______ Longest time in the Real World? ______

# of psychiatric hospitalizations: ______________ Diagnosis: _________________________

On a scale of 1-10 one being not committed at all to 10 being I'll do everything I legally can to stay free, how do you rate yourself as to your motivation to stay out of prison? ____

Would you be willing to work on a plan to help you stay out of jail? _____

On a scale of 1-10, one being not at all to 10 being I'll do everything I legally can to stay free, how likely are you to use a relapse prevention plan? ____

On a scale of 1-10, one being not at all to 10 being total control, rate your ability to manage your behaviors. ___
[SCRIPT] "To get started, tell me about yourself and how you landed in the MHU." We are mostly interested in the most recent event. When interviewees talk about other parts of their history take notes, the information is useful in determining patterns.

What do you think helped get you here (in prison)?

______________________________________________________________________________

______________________________________________________________________________

What do you think it will take to keep you out?

______________________________________________________________________________

______________________________________________________________________________

[SCRIPT] "I'd like to hear about what works and doesn't work--what rewards and punishments—you got from breaking the law."

What are the positives of your criminal acts?

______________________________________________________________________________

______________________________________________________________________________

What are the negatives of your criminal acts?

______________________________________________________________________________

______________________________________________________________________________

[SCRIPT] "Tell me about your family & friends. Who do you rely on? Who helps you? When are you around them?" The aim is to find out who the interviewee associates with (positive and negative).
What kind of support system do you have on the outside?

______________________________________________________________________________

______________________________________________________________________________

How helpful do you think your support system is? (how?, what resources?)

______________________________________________________________________________

______________________________________________________________________________

How helpful has it been in the past and what, if anything, would make it more helpful? (Validity question asked later to determine consistency and linearity of thought processes)

______________________________________________________________________________

______________________________________________________________________________

What do you think got you locked up in the first place? (validity question asked later to determine consistency linearity of thought processes)

______________________________________________________________________________

______________________________________________________________________________

What do you think you need to change about that?

______________________________________________________________________________

______________________________________________________________________________

Would you be willing to help other members work on their self-managed plan? _____
What, if anything were you told about your mental illness/ Who told you?

______________________________________________________________________________

What, if anything, were you told about your drug prescriptions? How do those work for you?

______________________________________________________________________________

Substance use history (what, how often, how much, age of first use, current use?)

______________________________________________________________________________

______________________________________________________________________________

Is there anyone in the unit that you would not want in your group?

______________________________________________________________________________

______________________________________________________________________________

Screener Notes (include brief MSE):

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

Recommend for inclusion: _____________________

Screener: ___________________________ Date: ___________________
### Brief Mental Status Exam (MSE) Form

| Appearance          | Casual dress, normal grooming & hygiene  
|                    | Other (describe)  
| Attitude           | Calm & cooperative  
|                    | Other (describe)  
| Behavior           | No unusual movements or psychomotor changes  
|                    | Other (describe)  
| Speech             | Normal rate/tone/volume/ w/out pressure  
|                    | Other (describe)  
| Affect             | Reactive & mood  
|                    | Normal range congruent  
|                    | Labile  
|                    | Depressed  
|                    | Tearful  
|                    | Constricted  
|                    | Blunted  
|                    | Flat  
|                    | Other (describe)  
| Mood               | Euthymic  
|                    | Anxious  
|                    | Irritable  
|                    | Depressed  
|                    | Elevated  
|                    | Other (describe)  
| Thought Process     | Goal-directed & Logical  
|                    | Disorganized  
| Thought Content     | Suicidal ideation  
|                    | None  
|                    | Passive  
|                    | Active  
|                    | Y  
|                    | N  
|                    | If Active: Plan  
|                    | Intent  
|                    | Means  
|                    | Y  
|                    | N  
|                    | Homicidal ideation  
|                    | None  
|                    | Passive  
|                    | Active  
|                    | Y  
|                    | N  
|                    | If Active: Plan  
|                    | Intent  
|                    | Means  
|                    | Y  
|                    | N  
| Perception         | No hallucinations or delusions during interview  
|                    | Other (describe)  
| Orientation        | Oriented X 3  
|                    | Other (describe)  
| Memory/Concentration| Short Term Intact  
|                    | Long Term Intact  
|                    | Distractable/Inattentive  
|                    | Other (describe)  
| Insight/Judgment   | Good  
|                    | Fair  
|                    | Poor  

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Appendix 4

Instrumentation
### Emotional Problems Scales (Corrections)

<table>
<thead>
<tr>
<th>Participant #________</th>
<th>Examiner____________________________</th>
<th>Date________</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male ☐</td>
<td>Female ☐</td>
<td></td>
</tr>
<tr>
<td><strong>Straight ☐ Gay ☐ Lesbian ☐ Bisexual ☐ Transgender ☐</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Married ☐ Single ☐ Divorced ☐ Separated ☐ Widowed ☐</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hispanic/Latino ☐ American Indian or Alaskan Native ☐ Asian ☐</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black or African American ☐ Native Hawaiian or Other Pacific Islander ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White or European American ☐ Multi-Racial ☐ Other ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-23 ☐</td>
<td>24-29 ☐</td>
<td>30-35 ☐</td>
</tr>
<tr>
<td><strong>1st -4th grade ☐ 5th-8th grade ☐ 9th-12th grade did not graduate ☐</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GED ☐</td>
<td>High School Diploma ☐ Some College ☐</td>
<td></td>
</tr>
<tr>
<td>Associate or Technical Degree ☐ Bachelor Degree ☐ Graduate Degree ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PhD. or Professional Degree ☐</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Please answer the following questions as they apply to you. If the answer to a question is more true than false, mark the space for True with an X. If the question is more false than true, mark the space for False with an X. Please work carefully and be honest.

Example:

<table>
<thead>
<tr>
<th>I like to win more than I like to lose.</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>❌</td>
<td>⬜</td>
</tr>
<tr>
<td></td>
<td>Statement</td>
<td>True</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1</td>
<td>People like me.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I am a patient person.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I hate myself.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>People often tell me to calm down.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>People are rarely mean to me.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I still enjoy most things.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I feel like a failure in life.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>It is easy for me to keep my cool.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I like to use a different kind of drug or have a different kind of drink each time.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>The future looks good for me.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I would be better off dead.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>It is easy for me to stay relaxed.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>I am loved.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>It is easy for me to make decisions.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>It is often my fault when bad things happen.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>I often think about things over and over.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>I rarely feel unhappy.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>I have a reason to die.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>I wake up feeling good in the morning.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>I have seen something horrible.</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>I never get angry.</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Sometimes I can't stop myself from saying bad things.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Statement</td>
<td>True</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>23</td>
<td>People have been injured as a result of my drinking or drug use.</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>My future is hopeless.</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Sometimes I see things and they go away.</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>I have quit using alcohol or drugs several times in the past.</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>I am a helpful person.</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>I rarely get upset.</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Sometimes I hate myself.</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Strange things happen to my body.</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>I think I am an important person.</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Alcohol or drugs has caused my problems with the law.</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>People know the real me.</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>I feel lonely.</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>I often get mad.</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>I don't like who I am.</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>I lack confidence.</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>I always tell the truth.</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>I never argue.</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>I have a lot to look forward to.</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>When things don't go my way I lose my temper.</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>I am always nice to everyone.</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>I like to be around other people.</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>I almost always feel different from others.</td>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td>---</td>
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</tr>
<tr>
<td>45</td>
<td>I have never been bad.</td>
<td>True</td>
</tr>
<tr>
<td>46</td>
<td>It's often my fault when bad things happen.</td>
<td>True</td>
</tr>
<tr>
<td>47</td>
<td>I like the way I look.</td>
<td>True</td>
</tr>
<tr>
<td>48</td>
<td>I worry about doing things wrong.</td>
<td>True</td>
</tr>
<tr>
<td>49</td>
<td>I have lots of energy.</td>
<td>True</td>
</tr>
<tr>
<td>50</td>
<td>I am useful.</td>
<td>True</td>
</tr>
<tr>
<td>51</td>
<td>I hear things that others don't hear.</td>
<td>True</td>
</tr>
<tr>
<td>52</td>
<td>I rarely have crazy thoughts.</td>
<td>True</td>
</tr>
<tr>
<td>53</td>
<td>I feel good in the morning.</td>
<td>True</td>
</tr>
<tr>
<td>54</td>
<td>I like to get even with people.</td>
<td>True</td>
</tr>
<tr>
<td>55</td>
<td>I hate the way I look.</td>
<td>True</td>
</tr>
<tr>
<td>56</td>
<td>I am not worth much.</td>
<td>True</td>
</tr>
<tr>
<td>57</td>
<td>I am a good person.</td>
<td>True</td>
</tr>
<tr>
<td>58</td>
<td>Sometimes I feel so upset that I want to throw things and break things.</td>
<td>True</td>
</tr>
<tr>
<td>59</td>
<td>Sometimes my thoughts scare me.</td>
<td>True</td>
</tr>
<tr>
<td>60</td>
<td>I often do things without thinking.</td>
<td>True</td>
</tr>
<tr>
<td>61</td>
<td>I never lie.</td>
<td>True</td>
</tr>
<tr>
<td>62</td>
<td>I wish I could change myself.</td>
<td>True</td>
</tr>
<tr>
<td>63</td>
<td>I have been to an AA, NA, or CA meeting.</td>
<td>True</td>
</tr>
<tr>
<td>64</td>
<td>Alcohol or drugs has caused me problems with my family.</td>
<td>True</td>
</tr>
<tr>
<td>65</td>
<td>I have never been in trouble.</td>
<td>True</td>
</tr>
<tr>
<td>66</td>
<td>I have gotten into trouble because of my temper.</td>
<td>True</td>
</tr>
<tr>
<td></td>
<td>Statement</td>
<td>True</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>67</td>
<td>I see crazy things other people don't see.</td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>I feel nervous a lot.</td>
<td></td>
</tr>
<tr>
<td>69</td>
<td>I am to blame for my problems.</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>I often smell strange things.</td>
<td></td>
</tr>
<tr>
<td>71</td>
<td>My mind is OK.</td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>I feel separate from others and my surroundings.</td>
<td></td>
</tr>
<tr>
<td>73</td>
<td>At times I wish I were dead.</td>
<td></td>
</tr>
<tr>
<td>74</td>
<td>I will never be much of anything.</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>I am a nice person.</td>
<td></td>
</tr>
<tr>
<td>76</td>
<td>I have never done embarrassing things I didn't remember.</td>
<td></td>
</tr>
<tr>
<td>77</td>
<td>I am good looking.</td>
<td></td>
</tr>
<tr>
<td>78</td>
<td>I often lie in bed and worry about things.</td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>I worry about my work.</td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>I can usually control myself.</td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>I don't like myself much.</td>
<td></td>
</tr>
<tr>
<td>82</td>
<td>I am a very strange person.</td>
<td></td>
</tr>
<tr>
<td>83</td>
<td>I have been in a physical fight as an adult.</td>
<td></td>
</tr>
<tr>
<td>84</td>
<td>I would like to kill myself.</td>
<td></td>
</tr>
<tr>
<td>85</td>
<td>I have never gotten in trouble because of alcohol or drugs.</td>
<td></td>
</tr>
<tr>
<td>86</td>
<td>Sometimes I just blow up.</td>
<td></td>
</tr>
<tr>
<td>87</td>
<td>When I get mad, I say nasty things.</td>
<td></td>
</tr>
<tr>
<td>88</td>
<td>I worry about a lot of things.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Statement</td>
<td>True</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>89</td>
<td>I wish I could change the way I look.</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>Someone slipped something in my drink when I was younger.</td>
<td></td>
</tr>
<tr>
<td>91</td>
<td>I wish I were different.</td>
<td></td>
</tr>
<tr>
<td>92</td>
<td>Someone else controls my mind.</td>
<td></td>
</tr>
<tr>
<td>93</td>
<td>I like being in crowds.</td>
<td></td>
</tr>
<tr>
<td>94</td>
<td>Sometimes I don't know where I am.</td>
<td></td>
</tr>
<tr>
<td>95</td>
<td>I can use my mind to control others.</td>
<td></td>
</tr>
<tr>
<td>96</td>
<td>I can't sit with my back to people.</td>
<td></td>
</tr>
<tr>
<td>97</td>
<td>I have an alcohol or drug problem.</td>
<td></td>
</tr>
<tr>
<td>98</td>
<td>I keep remembering a bad event.</td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>Seeing or hearing certain things remind me of something bad from the past.</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>I have trouble sticking to a limit once I start drinking or using a drug.</td>
<td></td>
</tr>
<tr>
<td>101</td>
<td>I have attempted suicide.</td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>People would be better off if they listened to my advice.</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>I am very jumpy.</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>I rarely feel tense.</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>Most people have a few drinks or take something to help them get through the week.</td>
<td></td>
</tr>
<tr>
<td>106</td>
<td>One of my family members committed suicide.</td>
<td></td>
</tr>
<tr>
<td>107</td>
<td>People say I am a hothead.</td>
<td></td>
</tr>
<tr>
<td>108</td>
<td>I worry about what is going to happen.</td>
<td></td>
</tr>
<tr>
<td>109</td>
<td>My mind sometimes leaves my body.</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Statement</td>
<td>True</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>110</td>
<td>I am always in a good mood.</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>I worry that someone will tell me that I am doing things the wrong way.</td>
<td></td>
</tr>
<tr>
<td>112</td>
<td>I worry more than other people.</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>I do and say things when under the influence of alcohol or drugs that I wouldn't do sober.</td>
<td></td>
</tr>
<tr>
<td>114</td>
<td>I find it hard to wait for things.</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>I am a responsible person.</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>Other people say I am crazy.</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>I lose my temper easily.</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>I like the way I am.</td>
<td></td>
</tr>
<tr>
<td>119</td>
<td>When I get angry, I calm down easily.</td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>I rarely act crazy.</td>
<td></td>
</tr>
<tr>
<td>121</td>
<td>I rarely lose control of myself.</td>
<td></td>
</tr>
<tr>
<td>122</td>
<td>People are out to get me.</td>
<td></td>
</tr>
<tr>
<td>123</td>
<td>I need to do something to relax before meeting new people.</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>I am a nervous person.</td>
<td></td>
</tr>
<tr>
<td>125</td>
<td>Sometimes I feel like killing other people.</td>
<td></td>
</tr>
<tr>
<td>126</td>
<td>Sometimes I can't stop myself from saying bad things.</td>
<td></td>
</tr>
<tr>
<td>127</td>
<td>It is easy for me to make up my mind.</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>I have reduced my drug or alcohol use by choice.</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>I have thoughts of killing myself.</td>
<td></td>
</tr>
<tr>
<td>130</td>
<td>The morning after partying, I would rather be alone.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Question</td>
<td>True</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>131</td>
<td>Sometimes I don't know who I am.</td>
<td>True</td>
</tr>
<tr>
<td>132</td>
<td>I get angry a lot.</td>
<td>True</td>
</tr>
<tr>
<td>133</td>
<td>I worry about what others will say to me.</td>
<td>True</td>
</tr>
<tr>
<td>134</td>
<td>I feel anxious a lot.</td>
<td>True</td>
</tr>
<tr>
<td>135</td>
<td>I am usually successful at things I try.</td>
<td>True</td>
</tr>
<tr>
<td>136</td>
<td>My life is generally pretty good.</td>
<td>True</td>
</tr>
<tr>
<td>137</td>
<td>I like myself.</td>
<td>True</td>
</tr>
<tr>
<td>138</td>
<td>I usually don't worry about things.</td>
<td>True</td>
</tr>
<tr>
<td>140</td>
<td>I am afraid of a lot of little things.</td>
<td>True</td>
</tr>
<tr>
<td>141</td>
<td>Evil forces control me.</td>
<td>True</td>
</tr>
<tr>
<td>142</td>
<td>I get angry with people too quickly.</td>
<td>True</td>
</tr>
<tr>
<td>143</td>
<td>I wonder if I am a bad person inside.</td>
<td>True</td>
</tr>
<tr>
<td>144</td>
<td>Sometimes I am out of control.</td>
<td>True</td>
</tr>
<tr>
<td>145</td>
<td>I feel life is worth living.</td>
<td>True</td>
</tr>
<tr>
<td>146</td>
<td>I worry too much.</td>
<td>True</td>
</tr>
<tr>
<td>147</td>
<td>I hear strange things when I am alone.</td>
<td>True</td>
</tr>
<tr>
<td>148</td>
<td>I sleep very well.</td>
<td>True</td>
</tr>
<tr>
<td>149</td>
<td>I have a bad temper.</td>
<td>True</td>
</tr>
<tr>
<td>150</td>
<td>I wish I weren't so nervous.</td>
<td>True</td>
</tr>
<tr>
<td>151</td>
<td>Sometimes my heart beats very fast.</td>
<td>True</td>
</tr>
<tr>
<td>152</td>
<td>Alcohol or drugs has caused my problems with my job.</td>
<td>True</td>
</tr>
<tr>
<td>Number</td>
<td>Statement</td>
<td>True</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>153</td>
<td>I have broken promises to myself about when, where, or how much I use drugs or alcohol.</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>I find it easy to stay calm.</td>
<td></td>
</tr>
<tr>
<td>155</td>
<td>Others would be better off if I were dead.</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>I am a stupid person.</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>I am a failure.</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>I am always good.</td>
<td></td>
</tr>
<tr>
<td>160</td>
<td>I am easily bothered by things.</td>
<td></td>
</tr>
<tr>
<td>161</td>
<td>I have been arrested because of alcohol or drug use.</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>I am good at a lot of things.</td>
<td></td>
</tr>
<tr>
<td>163</td>
<td>People have never lied about my drinking or drug use.</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>I feel that nobody cares for me.</td>
<td></td>
</tr>
<tr>
<td>165</td>
<td>I am not crazy.</td>
<td></td>
</tr>
<tr>
<td>167</td>
<td>I think about killing myself.</td>
<td></td>
</tr>
<tr>
<td>168</td>
<td>I rarely worry about being sick.</td>
<td></td>
</tr>
<tr>
<td>169</td>
<td>People appreciate me.</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>There is something missing in me.</td>
<td></td>
</tr>
<tr>
<td>171</td>
<td>A lot of times, I don't feel like doing anything.</td>
<td></td>
</tr>
<tr>
<td>172</td>
<td>I have been physically abused as a child.</td>
<td></td>
</tr>
<tr>
<td>173</td>
<td>I have been sexually abused as a child.</td>
<td></td>
</tr>
<tr>
<td>174</td>
<td>I was homeless when I was arrested.</td>
<td></td>
</tr>
<tr>
<td>175</td>
<td>I will probably go to prison again.</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>176 I am a veteran.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>177 A doctor told me I have depression.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>178 A doctor told me I have anxiety.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>179 A doctor told me I am bipolar.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>180 A doctor told me I have an alcohol or drug problem.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>181 A doctor told me I have Post-traumatic Stress Disorder (PTSD).</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>182 A doctor told me I have a personality disorder.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>183 I have been arrested for murder or attempted murder</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>184 I have been arrested for assault.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>185 I have been arrested for battery.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>186 I have been arrested for domestic violence.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>187 I have been arrested for a sex offense.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>188 I have been arrested for kidnapping.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>189 I have been arrested for child neglect or endangerment.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>190 I have been arrested for burglary.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>191 I have been arrested for robbery.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>192 I have been arrested for fraud or bad checks.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>193 I have been arrested for identity theft.</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>194 I have been arrested for internet crimes.</td>
<td>True</td>
<td>False</td>
</tr>
</tbody>
</table>

What charge or charges are you currently serving time for?

________________________________________________________________________
________________________________________________________________________