Improving Mental Health Services for Prisoners with Serious Mental Illnesses

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i. PROTOCOL SYNOPSIS

Study Title	Improving Mental Health Services for Prisoners with Serious Mental Illnesses
Funder	**National Institute of Mental Health**
Clinical Phase	**Pilot study**
Study Rationale	People with serious mental illnesses (SMI) are overrepresented across the criminal justice system. While incarcerated in prison, people with mental illness (MI) face higher rates of violence and behavioral infractions than the general prison population and experience administrative segregation (isolation) with more frequency and intensity. A growing body of literature suggests that to improve outcomes for incarcerated people with MI, mental health treatments need to be expanded to include interventions that directly address risk factors related to criminal activity. Specifically, these interventions must target the risk factors most closely associated with criminal activity (e.g. criminogenic risk factors). There are criminogenic interventions, such as Thinking for a Change (T4C)[1], which have been shown to significantly reduce criminal offending, behavioral infractions and time in administrative segregation among general offenders. Despite promising evidence, criminogenic interventions are not used with prisoners with mental illness because of neurocognitive and social impairments associated with mental illness inhibits their use with this population. Thus, these interventions must be adapted in order to be used effectively with people with mental illness.
Study Objective(s)	**Primary** • To test the study intervention's ability to engage the study outcomes (aggression, behavioral infractions, administrative segregation). **Secondary** • To test the study intervention's engagement with the study treatment targets (impulsivity, interpersonal problem solving, and criminal thinking).
Test Article(s) *(If Applicable)*	The research intervention is Thinking for Change for prisoners with mental illness (T4C-MI)[1]. This intervention has two components. The first component is Thinking for a Change (T4C), a CBT based group intervention that includes three treatment modules delivered over the course of 25-session in a closed-group format to 8-12 people up to twice a week over 12-14 weeks. The second component of T4C-MI is the Targeted Service Delivery Approach (TSDA) that this research team developed for use during the delivery of T4C to compensate for the impact of the neurocognitive and social impairments associated with mental illness on participants' ability to fully engage in and understand T4C's intervention materials.
Study Design	This study will use an RCT to conduct a pilot effectiveness trial of the study intervention. Participants in this study will be randomly assigned to

	one of two study arms: 1) the experimental condition which involves the study intervention T4C-MI and 2) the control condition which involves standard prison treatment and programming. The pilot study will take place in up to four facilities in the North Carolina Prison system.
Subject Population key criteria for Inclusion and Exclusion:	**Study inclusion criteria** include: (a) aged 18 years or older; (b) have a diagnosis of schizophrenia, schizoaffective disorder, psychotic disorder, bipolar disorder or major depressive disorder (c) have moderate to high criminogenic risk levels as determined by the Level of Service Inventory (d) have at least one year or more remaining on his or her prison sentence at the time of the screening interview. **Study exclusion criteria** include: (a) an intellectual or developmental disability; (b) have assault precautions or other restrictions that would preclude the person from being in group gathering spaces within the prison where the intervention will take place; and (c) participation in T4C in the last 6 months.
Number Of Subjects	Up to 112
Study Duration	• Each subject's participation will last 9 months • This study will be active for 4 years.
Study Phases Screening Study Treatment Follow-Up	(1) Study Recruitment and Informed Consent A) Prison Staff will provide study personnel with list of potentially eligible participants. B) Study staff will invite potentially eligibility participants to meet with them to discuss study. Study staff will complete informed consent with all potential participants who agree. (2) Study Screening- All potential participants who agree to participate in the study after informed consent is completed will participate in a screening interview to determine study eligibility. (3) All participants who are found eligible at the end of the screening interviews will be randomized to one of the two study arms (e.g. experimental or control condition). These individuals will make up the study sample (4) Baseline interviews will be completed with all study participants. (5) Study participants who are randomized into the experimental condition will participate in the study intervention. Those who are randomized into the control condition will receive standard prison treatment and programming. (6) Follow up: Study participants will participate in follow-up interviews at 3- and 6- months post-baseline. (7) Administrative data related to behavioral infractions and administrative segregation will be gathered at 9-months post-baseline.

	The statistical analyses of this study will explore the treatment effect of the study intervention on the study outcomes (aggression, receipt of behavioral infractions, and time spent in administrative segregation) and the study treatment targets (impulsivity, social problem solving, and criminal attitudes and associates). Additionally, mediation analyses will be conducted to explore whether treatment effects on study outcomes operate indirectly through study treatment targets.
DATA AND SAFETY MONITORING PLAN	This is a small-scale, pilot study with a relatively small number of subjects; thus, in lieu of a Data and Safety Monitoring Board, the PI will perform the monitoring function as part of the general oversight and scientific leadership of the study

1. BACKGROUND AND RATIONALE

1.a. Background

People with serious mental illnesses (SMI) are overrepresented across the criminal justice system. While incarcerated in prison, people with mental illness (MI) face higher rates of violence and behavioral infractions than the general prison population and experience administrative segregation (isolation) with more frequency and intensity. These experiences substantially increase negative outcomes for prisoners with MI, including exacerbated symptoms of mental illness and trauma. Moreover, following release, more than 60% of people with MI return to custody within three years, creating an incarceration–punishment cycle at great personal and social cost. This cycle clearly underscores an urgent need for interventions designed to reduce levels of aggression, behavioral infractions, and time in isolation among prisoners with MI, with the overall aim of improving outcomes among this population both while incarcerated and after release.

1.b. Study Rationale

Extant research posits that the best predictors and risk factors for criminal activity are the same for people with SMI and those without SMI[2,3]. These factors, called criminogenic risks, are derived from the Risk Needs Responsivity model (RNR) and include anti-social behavior, anti-social personality, anti-social cognitions, anti-social associates, substance use, family conflict, school or work problems, and lack of pro-social leisure activities[4–6]. There is evidence that, compared to non-SMI justice-involved persons, justice-involved persons with SMI have higher overall levels of criminogenic risk factors[7,8] and higher levels of specific criminogenic risk factors such as criminal thinking and criminal attitudes[9–12]. The growth in our understanding of the nature and extent of criminogenic risk factors among justice-involved persons with SMI has led some experts to suggest that in order to achieve optimal mental health and criminal justice outcomes in this population, mental health services need to include interventions that directly address criminogenic risk factors[13,14].

A number of community-based mental health interventions have been developed to divert people with SMI away from jails and prisons. These interventions include pre- and post-booking jail diversion services[15,16], community reentry services[17,18], mental health courts[19,20], and specialized probation caseloads[21]. These interventions have had some success at reducing mental health symptoms, but none have been able to improve criminal justice outcomes for people with SMI[22–25]. Moreover, virtually none of this research has focused on improving the outcomes of persons with mental illness while incarcerated in prison, and this is a remarkable gap in our understanding given the increased risk of behavioral infractions

and administrative segregation for prisoners with SMI. In order to break the cycle of behavioral infractions, administrative segregation and further deterioration in mental health functioning, which characterizes the experiences of the large and growing population of people with SMI in prisons, prison-based mental health interventions must directly target the criminogenic risk factors most strongly associated with criminal activities. For the general offender population, a group of cognitive behavioral interventions, known as criminogenic interventions, have been shown to be effective at addressing criminogenic risk factors. However, the neurocognitive and social impairments associated with SMI impede there use with this population, which creates a critical gap in services for justice involved people serious mental illnesses generally and those that are incarcerated specifically.

2. STUDY OBJECTIVE

2.a. Primary Objective: The purpose of this study is to examine the effectiveness of T4C-MI by testing the intervention's ability to engage the study outcomes (aggression, behavioral infractions, administrative segregation).

2.b. Secondary Objective: The secondary objective of this study is to test the ability of intervention to engage the study treatment targets (impulsivity, interpersonal problem solving, and criminal thinking)

3. STUDY DESIGN

This study will engage a pilot effectiveness trial to examine the extent to which T4C-MI impacts its intended targets (mediating mechanisms) and outcomes among prisoners with SMI. The study will use a randomized controlled design to assign participants to one of the two study arms 1) the study intervention (T4C-MI) or 2) Standard Prison Treatment and programming. The study will take place in the North Carolina Prison system and will involve up to four facilities.

3.a. Allocation to Treatment Groups

In this study randomization will take place on site at the prison, which does not allow electronic equipment to be brought into facilities. Therefore, the study team will use a shuffled envelops to randomize participants on site at the prison. The study team will use a table of computer-generated random numbers and block randomization procedures to ensure an equal distribution of subjects to each arm of the study. Study staff will not be blinded to participant condition.

3.b. Study Duration, Enrollment and Number of Subjects

The study will be active for 4 years. Each participant will be involved for 9 months.

4. RECRUITMENT AND ENROLLMENT OF SUBJECTS

The RCT phase will use convenience sampling techniques to enroll up to 112 participants who meet the study eligibility criteria.

4.a. Study inclusion criteria include:

(a) aged 18 years or older;

(b) have a diagnosis of schizophrenia, schizo-affective disorder, psychotic disorder, bipolar disorder or major depressive disorder;

(c) have moderate to high-risk criminogenic risk levels as determined by the Level of Service Inventory: and

(d) have at least one year or more remaining on his or her prison sentence at the time of the screening interview.

4.b. Study exclusion criteria include:

(a) an intellectual or developmental disability;

(b) assault precautions or other restrictions that would preclude the person from being in group gathering spaces within the prison where the intervention will take place; and

(c) participation in T4C in the last 6-months.

4. RECRUITMENT

Correctional staff member's only role in the recruitment process is to provide the research team with list of the pool of potentially eligible participants at the time of enrollment. As part of this process the correctional staff will use prison records to identify and remove inmates who have an intellectual disability and/or are on restrictions that would preclude him/her from being in group gathering spaces. Members of the research team will conduct all recruitment activities, which includes inviting potentially eligible prisoners to meet with them in a private setting in the prison to learn about the study. During this initial meeting, research staff will provide potential participants with a flyer that described the study and discuss potential participant's questions. In the initial meeting, the research staff emphasize the voluntary nature of the study and that the person's decision about participation has no bearing on their criminal or civil cases.

5. STUDY INTERVENTION

This study will have two study arms: The experimental intervention is T4C-MI and the control condition is Standard Prison Treatment and Programming.

5.a. Experimental Intervention

The research intervention is T4C-MI – Thinking for a Change for prisoners with mental illness. This intervention has two components. The first component is Thinking for a Change (T4C)[1], which is an established, manualized intervention shown to be effective at reducing behavioral infractions and time in administrative segregation among prisoners in the general population. T4C is a highly structured, 25-session, manualized intervention that is delivered in a closed-group format to 8-12 people up to twice a week over 12-14 weeks. The intervention curriculum includes three modules: (1) 10 sessions on social skills training that teach participants cognitive skills to interpret and respond positively to social situations that involve potential conflict; (2) 5 sessions on cognitive restructuring activities that teach participants a concrete process for self-reflection that is designed to help individuals identify and correct maladaptive or dysfunctional thought processes, such as anti-social thoughts, feelings, attitudes and beliefs that could lead to criminal activity; and (3) 10 sessions on problem-solving techniques which integrates the skills from the first two modules into a structured problem-solving method that can be used to manage interpersonally challenging situations. More information on this intervention can be found at in the treatment manual[26].

The second component of T4C-MI is the Targeted Service Delivery Approach (TSDA)[26] that this research team developed to improve access to interventions like T4C for justice-involved persons with mental illness. The goal of the TSDA is to minimize the impact of neurocognitive and social impairments associated with mental illness on participants' ability to fully engage in and understand T4C's intervention materials. To achieve this goal the TSDA uses five therapeutic strategies during the delivery of T4C. These therapeutic strategies include repetition and frequent summarizing, amplification techniques, active coaching, low-demand practice, and techniques to maximize participation. The therapeutic strategies used in the TSDA are designed to work together during the delivery of the T4C to maximize participants' engagement with the intervention materials during each session. More information on the TSDA can be found in the publication[26].

5.b. Control Condition

People assigned to the control condition will receive standard prison treatment and programing. Standard prison treatment and programming includes any mental health services that participants are otherwise eligible to receive from the prison during the study time period. Prison mental health services include a range of treatment services that are designed to help people adjust to incarceration. These services include crisis services focused on addressing suicidal thoughts and behaviors and other mental health crisis; psychiatric evaluation, consultation, and medication management; and individual counseling to help to stabilize a prisoner's mental illness so he or she can function appropriately in the prison environment. Prison staff make all decisions regarding eligibility and allocation of all services and programming offered by the prison.

6. STUDY PROCEDURES

Study participants will complete up to four, face to face interviews. The first interview is the screening interview where study eligibility is determined. Participants who meet the study eligibility criteria are enrolled in the study, randomized into one of the two study conditions. People who are randomly assigned to the experimental condition receive the study intervention and those who are randomly assigned to the control condition receive standard prison treatment and programming. All participants who are randomized to either study condition complete three additional follow up interviews: the baseline interview as well as 3- and 6-month interviews. Additionally, administrative data related to behavioral infractions and administrative segregation are collected at the 9-month time point.

6.a Description of Research Procedures

The study procedures are listed below.

All research interviews will take place in private locations in the prison:

First: Recruitment of study subjects will begin the month prior to the initiation of each intervention cycle. Correctional staff at the facility where the intervention is being delivered, will provide the research team with a list of all of the prisoners in their facility who meet the following criteria: a) 18 years and older: b) have mental health issues: c) have at least 1 year remaining on his or her prison sentence: d) do not have any restriction that would preclude the person from being in group gathering spaces within the prison; and e) do not have an intellectual or developmental disability.

Second: Research staff will go to the prison and invite potentially-eligible prisoners to meet with them in a private setting to learn about the study. During this initial meeting, research staff will provide participants with a flyer that describes the study and discuss potential participant's questions. The study flyer and discussions with potential participants will include information about the voluntary nature of the study and will explain that the person's decision about participation has no bearing on the person's criminal or civil cases. The research staff will also explain that the participant can end his or her participation in the study at any time during the recruitment or study process without negative consequences.

Three: Immediately after completing the recruitment meeting research staff will complete Informed consent with all participants who express interest in participation in the study. This meeting will take place in a private setting in the prison.

Fourth: Research staff will complete a screening interview immediately after the informed consent process with all potential subjects who agree to participate in the study after completing informed consent. The study screening interview will determine whether participants are eligible to participate in the study by screening for mental health diagnoses, criminogenic risk levels, and prior engagement in T4C.

Fifth: At the end of the screening interview potential participants will be informed whether they meet the study eligibility criteria. Participants who are found eligible for the study and agree to participate will be assigned to a study condition. During the RCT phase of the study, participants will be randomized into one of two conditions, the research intervention (T4C-MI) or the control condition (Standard prison treatment and programming). The research staff will randomly assign participants to a study condition by opening a sequentially numbered envelope and discussing the condition assignment with the participant. In order to be sure that interviews are not too long, the screening and baseline interviews will be broken into two separate interviews, conducted at least one day apart from each other. After randomization is complete the research staff will schedule a mutually agreed upon time to return to complete the baseline interview.

Six: Research staff will complete a baseline interview with all study participants. This interview will take place in a private location in the prison. The baseline interview will include a brief assessment of participant's neurocognitive functioning, clinical and criminal justice history, and baseline assessments of treatment targets and study outcomes. The baseline interview will take 60-90 minutes to complete.

Seven: Research staff will complete follow-up interviews with all study participants at 3-, 6 -months after the baseline interview. Each interview is expected to take 30-60 minutes to complete and will be conducted in a private setting in the prison. Participants' outcomes will also be assessed at 9 months post release using administrative data.

6.b Informed Consent

Research staff will engage written Informed consent with all potential participants who express an interest in participation in the study during recruitment. Participants will also be asked to sign a HIPPA Authorization form allowing the study team to collect administrative pertaining to the study outcomes. Given concerns about the heightened risk of coercion that exists when conducting research in correctional settings, the research team took the following steps to minimize the risk of coercion in this study and obtain informed consent. First, although the recruitment process involved correctional staff, the involvement of these staff members was limited to helping the research team identify the pool of potential participants. Second, only the members of the research team approached potential participants to discuss

the study and obtain informed consent. Third, research staff conducted all informed consent meetings, and these meetings were held in private spaces. Fourth, correctional staff were instructed that study participation is strictly voluntary. Fifth, research staff did not communicate the outcomes of potential participant contacts with correctional staff. Taken together, these steps minimized the chance that correctional staff directly or inadvertently tried to influence individuals' decision to participate in the study. All researchers involved in recruitment were trained to cover consent information clearly and comprehensively. Furthermore, study flyers, consent forms, and HIPAA authorization forms were made available, in print form, to all potential participants.

6.c. Assessments and Data Collection

All study measures, with the exception of the receipt of Behavioral Infractions and Time Spent in Administrative Segregation, will be administered in face-to-face interviews using a paper-based interview. Receipt of Behavioral Infractions and Time Spent in Administrative Segregation are collected via administrative data. See appendix A for descriptions of study measures.

7. RISKS AND BENEFITS

7. a. Risks

The risks associated with this study are minimal and no greater than those experienced in the course of everyday life. They include breach of confidentiality and the possibility that study participants could become emotionally upset by interview questions. The potential risks are minimal, no more than encountered in everyday life with the potential benefits outweighing the risks.

7.b. Benefits

This research is highly relevant for mental health and criminal justice authorities at local, state and national levels and has the potential to have a broad impact on criminal justice policy and practice. Findings from this research promise to support the development of an intervention that can improve outcomes for people with mental illness in prisons. This study addresses one of the most pressing public health and public safety issues facing our country today. The knowledge to be gained in the study will enable the research team- and other investigators- to undertake larger-scale, RCTs to establish the effectiveness of T4C-MI. Additionally it is possible that participants assigned to receive T4C-MI could receive additional support from this intervention and could realize fewer behavioral infractions and time in administrative segregation while incarcerated.

8. DATA COLLECTION AND MANAGEMENT

8.a. Data Collection

The study PI will facilitate an orientation for all research staff on how to conduct research interviews. The PI will also facilitate a brief training on the use of the study measures when necessary. All research staff involved in interviewing participants will have a minimum of a graduate degree in social work or a related discipline. Research staff will be trained to look for signs of distress, stop interviews when necessary, and connect participant with mental health services when required.

9. STATISTICAL ANALYSIS

Given the preliminary nature of this study, statistical analyses of our outcomes will not be conclusive; rather we will examine the data for trends across time rather than relying exclusively on tests of statistical significance.

9.a. Primary Outcomes

The primary outcomes of this study are: Aggression, Receipt of Behavioral Infractions, and Time Spent in Administrative Segregation (see Appendix B).

9.b. Secondary Outcomes

The secondary outcomes of this study are those measures listed as Treatment Targets in the conceptual model: Interpersonal Problem Solving, Criminal Attitudes and Associates, and Levels of Impulsivity (see Appendix B).

9.c. Statistical Methods

Treatment Targets and Study Outcomes that are collected via a standardized measure (i.e. Social Problem Solving, Criminal Attitudes and Associates, Impulsivity, and Aggression) are collected at baseline as well as during follow-up periods (see Appendix A). Study Outcomes that are collected via administrative data (i.e. receipt of behavioral infractions and time spent in administrative segregation), however, are not collected as baseline, rather are summed cumulatively over the period extending from the 3-month follow-up period through the 9-month follow-up period.

To examine the impact of T4C-MI on study outcomes that are measured dichotomously and only collected during follow-up periods (i.e. receipt of disciplinary fractions and administrative segregation), we will use chi-square tests to examine between-group differences during the post-test period. To examine between-group post-test differences when these outcomes are measured as counts (i.e. number of behavioral infractions received and days spend in administrative segregation), nonparametric tests will be used to test differences in group medians (e.g. Mann-Whitney Test) and regressions that can accommodate count data (e.g. Poisson, negative binomial) will be employed.

For Treatment Targets and Study Outcomes that are measured continuously and collected at both baseline and follow-up periods (i.e. Social problem solving, impulsivity, criminal attitudes and associates, and aggression), we will use T-tests to examine between-group differences at posttest as well as mixed effects linear models where measurement occasion at level 1 is nested within the individual at level 2.

The potential mediation effects of the proposed primary treatment targets on study outcomes will be explored using structural equation modelling (SEM) and generalized structural equation modelling (GSEM) frameworks to accommodate for variables that are measured both continuously and dichotomously.

9.d. Sample Size and Power

The sample will include up to 112 participants. Given the preliminary nature of this pilot study, our goals are not to fully test our hypotheses nor estimate effect sizes associated with T4C-MI. The main purpose of this R34 is to collect data on available sample size, sample attrition and sample retention and the generation of data and information necessary to conduct comprehensive power calculations for an R01. Nevertheless, here, the likelihood of detecting statistical significance will be increased due to the use of a longitudinal design with up to four measurements per subject on our treatment targets and outcome

measures. Also, our longitudinal design allows for each participant to serve as his/her own historic control, eliminating between-subjects variation and reducing standard errors, which increases power.

10. SAFETY ASSEESSMENT

The Study PI will oversee the safety of the study. Research data will be reviewed in a timely manner. The PI will comply with all existing policies for both documenting and reporting unanticipated or adverse events associated with this study.

10.a. Data Safety Monitoring Plan

This is a small-scale, pilot study with a relatively small number of subjects, thus, in lieu of a Data and Safety Monitoring Board, the PI will perform the monitoring function as part of the general oversight and scientific leadership of the study. The risk of the research intervention – T4C-MI- is relatively low. Any untoward effects of study participation will become apparent to the PI through close monitoring of individual study subjects and communication with prison staff.

11. PARTICIPANT RIGHTS AND CONFIDENTIALITY

11.a. Participant Confidentiality and Security

Project data and information will be maintained at the School of Social Work (SOSW) in the Tate-Turner-Kuralt Building on the campus of the University of North Carolina at Chapel Hill. At the SOSW, a secure, password-protected computer file for all project materials will be established with access restricted to the research team. All data schedules and interview forms will be filed securely away in locked file cabinets. All personal computers are password protected and servers are located on lockable offices.

Study subjects will be assigned unique, study identifiers. A separate master list of study IDs will be kept separately. Once data collection is complete, all personal identifiers will be destroyed. Once personal identifiers are destroyed all study subjects will be identified only by a unique study identifier.

All study documents will be maintained in locked filing cabinets within locked offices. Additionally, a Certificate of Confidentiality will be obtained to protect subject information. All interviews will take place in private settings within the prison. Participants will be informed that they can choose not to answer question(s) and can stop an interview at any time.

11.b. Study Discontinuation

There are four reasons that the study staff would withdraw a person from the research intervention and study: (1) in the unlikely event that a study participant would become aggressive or combative during the research intervention or research interview they would be withdrawn from the study; (2) if a subject's participation in the research intervention or interviews caused undue levels of emotional distress, either as reported by the subject or as observed by the researchers; and (3) if a subject asks to be withdrawn or declines further participation in the research intervention or follow-up research interviews at any point (4) if a subject is transferred or released from the prison where the experimental intervention is being delivered.

12. APPENDIX A: Assessment and Data Collection

	Initial Meeting and Screening Interview*	Baseline Interview	Delivery of the Study Intervention*	Three-month follow-up Interview	Six-month follow-up Interview	Nine-month administrative records check**
Screening and Intervention Delivery						
Recruitment and Informed Consent	**X**					
Participant Demographic and Background Characteristics	**X**					
Eligibility Determination	**X**					
Randomization	**X**					
Study intervention			**X**			
Data Collection						
Social Problem Solving		**X**		**X**		
Criminal Attitudes and Associates		**X**		**X**		
Impulsivity		**X**		**X**		
Aggression		**X**		**X**	**X**	
Behavioral Infraction**						**X**
Administrative Segregation**						**X**

*Only individuals randomized to the treatment condition are offered to participate in the intervention. The study intervention lasts between 12-14 weeks in duration

**This data is collected via administrative data, not through face-to-face interviews as is the other study data.

13. APPENDIX B: Description of Study Measures

Outcome	**Measure**	**Description**	**Citation**
Primary Study Outcomes			
Aggression	Aggression Questionnaire - Short Form (AQ-Short)	A 12-item measure with four subscales: physical aggression, verbal aggression, anger, and hostility. Items are scored on a 5-point Likert scale.	Bryant FB, Smith BD. Aggression Questionnaire--Short Form. Psyctests. 2001. doi:10.1037/t09754-000
Behavioral Infractions	From administrative data	Prison records will be used to ascertain the number of behavioral infractions participants incur.	n/a
Administrative Segregation	From administrative data	Prison records will be used to determine the length of time participants are confined in administrative segregation.	n/a

Secondary Outcomes			
Social Problem Solving	Social Problem-Solving Inventory - Revised, Long (SPSI-R:L)	A 52-item measure of problem-solving skills and problem orientation. Items are measured on a 7-point Likert scale. It has three scales that will be used in this analysis: problem orientation, problem solving skills, and social problem-solving inventory.	D'Zurilla TJ, Nezu AM, Maydeu-Olivares A (n.d). Social Problem-Solving Inventory - Revised. Psyctests. doi:10.1037/t05068-000
Criminal Attitudes and Associates	Measure of Criminal Attitudes and Associates (MCAA)	A 46-item measure. Responses are recorded in an agree/disagree format. MCAA includes four scales: attitudes toward violence, sentiments of entitlement, antisocial intent, and associates.	Mills JF, Kroner DG, Forth AE. Measures of Criminal Attitudes and Associates (MCAA): development, factor structure, reliability, and validity. Assessment. 2002 Sep;9(3):240-53. PubMed ID: 12216781
Impulsivity	Barratt Impulsiveness Scale (BIS-11)	A 30 item self-report measure. Items scored on a 4-point Likert scale. It is comprised of six subscales including attention, cognitive instability, perseverance, self-control, motor impulsiveness, and cognitive complexity.	Patton JH, Stanford MS, Barratt ES. Factor structure of the Barratt impulsiveness scale. J Clin Psychol. 1995 Nov;51(6):768-74. PubMed ID: 8778124

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