Master's Theses

University of Connecticut Graduate School

4-24-2014

A Closer Look at Violent Crimes among Severely Mentally Ill Patients Who Use Cocaine

Deepa Jayanti Mavani
University of Connecticut School, mavani@uchc.edu

A Closer Look at Violent Crimes among Severely Mentally Ill

Patients Who Use Cocaine

Deepa Jayanti Mavani

B.S. University of Connecticut 2011

A Thesis

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Public Health

at the

University of Connecticut

2014

APPROVAL PAGE

Masters of Public Health Thesis

A Closer Look at Violent Crimes among Severely Mentally Ill Patients Who Use Cocaine

Presented by:
Deepa Jayanti Mavani, B.S.

Major Advisor_____
Jane A. Ungemack, Dr.P.H

Associate Advisor_____
Joseph A. Burleson, Ph.D.

Associate Advisor_____
Anne C. Black, Ph.D.

University of Connecticut

2014

Acknowledgements

This thesis work would not have been possible without the support and assistance from many individuals. First I would like to express my gratitude to my major advisor, Dr. Jane Ungemack, for all her support and encouragement during my time at UCHC. Thank you for giving me the opportunity to work under your guidance and for encouraging me through my thesis research and so much more. I am fortunate to have had you as an advisor.

I would also like to thank the members of my graduate committee, Dr. Burleson and Dr. Black, for their advice and support. Dr. Burleson, thank you for all your assistance during this project and for your help with the statistics. Without your assistance, I would not have been so confident in my findings. Dr. Black, thank you for your support and guidance in choosing this topic; your help was instrumental in the completion of this project.

I also want to thank Dr. Marc Rosen at Yale University for allowing me use of his Abstinence Linked Money Management–Multi-site Study data.

Table of Contents

List of Tables

Abstract

It is estimated that one in four U.S. adults have a mental illness and that nearly half will develop a mental illness during their lifetime, with one in 17 people in the general population suffering from a severe mental illness (SMI) (National Institute of Mental Health, 2005). The high prevalence of SMI in conjunction with its presumed link with violence, suggests substantial risk to the public. Evidence remains inconsistent in determining if this link exists. Some suggest that specific SMI's such as schizophrenia and other psychosis–related disorders increase risk for violence, while others have reported no association (Fazel, et al., 2009). Establishing the validity of this link is necessary to formulate appropriate policies to address the risk of violence to the entire population. The aim of this study was to take a closer look at self-reported violent and nonviolent crimes within a population of severely mentally ill and substance-using individuals enrolled in treatment programs in Connecticut, paying close attention to comorbidities of different psychiatric and substance use disorders shown to increase risk of violent acts. This study used data from the Abstinence Linked Money Management– Multi-site Study conducted by Dr. Marc Rosen at Yale University.

The regression analysis revealed that specific SMIs (anxiety, mood and schizophrenic disorders) and substance dependence disorders (alcohol, opioid and cocaine) did not predict history of crime among individuals with SMI who used cocaine. The data indicated specific behavioral health diagnoses were not associated with committing either non-violent or violent crimes.

Introduction

It is estimated that one in four U.S. adults have a mental illness, with one in 17 people in the general population suffering from a severe mental illness (SMI) (National Institute of Mental Health, 2005). One definition of SMI applied in a bill for the Department of Health and Human Services states:

> Severe mental illness is defined through diagnosis, disability and duration, and includes disorders with psychotic symptoms such as schizophrenia, schizoaffective disorder, manic depressive disorder, autism, as well as severe forms of other disorders such as major depression, panic disorder, and obsessive compulsive disorder (Narrow, et al., 1998, p1602).

Severe mental illness (SMI) is presumed to cause violence, but whether it is causal, correlated or unrelated, has yet to be determined (Rueve & Welton, 2008). Several studies have suggested that violent behavior is more likely among people with SMIs (Fazel, Gulati, Linsell, Geddes, & Grann, 2009), while others claim that there is no direct link between SMI and an increased risk of violence (Langan, 2010). Aggression may be more of an issue in patients diagnosed with bipolar disorders and substance dependence (Ballester, et al., 2013; Rueve & Welton, 2008). These inconsistent results and differing opinions suggest that violent history among individuals with specific psychiatric diagnoses and disorders needs to be explored further.

The specific aim of this study was to look more closely at self-reported violent and nonviolent crimes among adults with co-occurring mental illness and cocaine abuse-receiving outpatient psychiatric treatment in Connecticut. The study examined comorbidities of different SMI's and use of substances, which have been shown to increase risk of violent acts (Fazel & Grann, 2006). This study used data from the

Abstinence Linked Money Management–Multi-site (ALMM) Study conducted by Dr.

Marc Rosen at Yale University, to examine this relationship.

Review of the Literature

Prevalence of Mental Illness in the General Population

Mental health is an important public health issue affecting a large proportion of the US population. It has been estimated that 25% of all U.S. adults have a mental illness and that nearly half of U.S. adults will develop a mental illness during their lifetime (Reeves, et al., 2011; National Institute of Mental Health, 2005). The prevalence of the major types of disorders in the US adult population include: 18.1% have anxiety disorders with 4.1% classified as severe; 9.5% have mood disorders with 4.3% being severe; 9.1% have personality disorders; and 1.1% have schizophrenia, which is already classified as a SMI (National Institute of Mental Health, 2005). While mental illnesses are widespread in the population, the main burden of illness is concentrated among a much smaller proportion, with 5.8% of the general population who suffer from a SMI (National Institute of Mental Health, 2005). The risks associated with SMI include increased occurrence of chronic diseases such as cardiovascular disease, diabetes, obesity, asthma, epilepsy, and cancer, as well as lower utilization of medical care, reduced adherence to treatment therapies, and higher risks of adverse health outcomes (Reeves, et al., 2011).

Prevalence of Violence in the General Population

Approximately 3.7% of US adults commit one or more violent acts each year, and the lifetime prevalence of aggressive behavior is as high as 24% (Swanson, Holzer, Ganju, & Jono, 1990). According to the Centers for Disease Control and Prevention (CDC), over 16,000 homicides occurred in 2010, making homicide the 16th leading cause of death (Reeves, et al., 2011). Poverty is one of the most consistent predictors of

homicide rates and covariates of violent crime in the United States (Rogers & Pridemore, 2013). Among women and men under the age of 45, those in poorer neighborhoods were three times more likely to commit a violent crime (Stanton, Baldwin, & Rachuba, 1997). Concentrations of poverty, a lack of resources and various indicators for social disorganization have all been determined to explain of crime (Hooghe, Vanhoutte, Hardyns, & Bircan, 2011). As such high rates of violence tend to occur in areas of lower education level, less social stability, and high rates of unemployment (Stanton, Baldwin, & Rachuba, 1997). The experience of unemployment leads to a loss of income and thus to an increased risk of poverty, however, simultaneously, other studies have demonstrated other negative outcomes, like a weakening of social relations, a feeling of social isolation and the loss of a socially meaningful role in society, all of which can increase risk of violent crimes (Hooghe, Vanhoutte, Hardyns, & Bircan, 2011).

Stigma and Perceptions of Mentally Ill Adults as Violent

The harsh stigmas that surround mental illnesses are abundant and many are associated with a violent stereotype (Rueve & Welton, 2008). As a result, fear, prejudice and discrimination exist towards people struggling with mental health problems. This generalized stereotype coupled with wider coverage of violence by those with mental illnesses has brought this issue to the forefront of public health and politics nationwide. Some examples of the recent mass shootings that were widely covered by the media that feed into the mass hysteria include:

Gabriel Giffords shooting - *Tucson, Arizona (January 2011)*
    Shooter, Jared Lee Loughner – after his arrest, two medical evaluations
    diagnosed him as paranoid schizophrenic and incompetent to stand trial.

Movie theater shooting - *Aurora, Colorado (July 2012)*
      Shooter, James Eagan Holmes – no known criminal record prior to the shooting, hospitalized after attempting suicide several times while in jail in November 2012. Currently going forward with an insanity defense.

Sandy Hook shooting– *Newtown, Connecticut (December 2012)*
      Shooter, Adam Lanza – "believed" to have had a personality disorder but was never clinically diagnosed.

Navy Yard shooting – *Washington, DC (September 2013)*
      Shooter, Aaron Alexis – had been experiencing insomnia, hearing voices, microwaves through his body. He had recently bought a 12-gauge shotgun and ammunition at a gun store in Virginia, after passing a state and federal background check.

As a result of such events, public and research attention has been focused on the presumed link between mental illness and violence. Establishing the validity of this link is necessary to formulate appropriate policies to assess the risk of violence to the entire population (Bradford, 2008). Further investigation into this presumed link is needed, because inaccurate representations of the relationship between mental health and violence have the potential to further stigmatize those living with mental illness and hinder their treatment and integration into the broader community (Appelbaum, 2013).

Mental Illness and Violence

The conclusions regarding the link between violence and mental illnesses have been inconsistent. For several decades, advocates and researchers have asserted that adults with mental health disorders show no increased risk of violence (Appelbaum, 2013; Langan, 2010). These researchers report that the link between mental illness and violence is tenuous and indirect, and they have concluded that people with mental illnesses, which range from simple phobias to schizophrenia, are no more likely to be involved in violent behavior than the general population (Shern & Lindstrom, 2013). On

the other hand, there is evidence that suggests that the likelihood of violent behavior is modestly increased among people with mental disorders (Fazel, Gulati, Linsell, Geddes, & Grann, 2009).

Much of the research on violence among individuals with SMI has focused on schizophrenia and other psychosis–related disorders, with meta-analysis showing 2-fold to 4-fold increases in the risks for violence for these patients (Fazel, Gulati, Linsell, Geddes, & Grann, 2009). However, epidemiologic data show that other mental disorders, including depression, bipolar disorders, anxiety disorders, and personality disorders, are also associated with an increased risk of violence and often to a greater extent than schizophrenia (Swanson, Holzer, Ganju, & Jono, 1990).

Much of the increased risk seen in people with mental disorders may be attributable to cofactors rather than the psychiatric disorder itself (Faria & Miguel, 2013). Substance use is one factor that has been attributed to increased risk for people with SMI (Fazel, Gulati, Linsell, Geddes, & Grann, 2009; Volavka & Swanson, 2010). A systematic review found that the risk of violence in those with substance use without psychosis is similar to those with a mental health comorbidity (Fazel, Gulati, Linsell, Geddes, & Grann, 2009). Much research has shown evidence for a relationship between use of alcohol and violent behavior (Hoaken & Stewart, 2003). Use of other substances, such as opiates and cocaine, were also found to be associated with violent behavior (Hoaken & Stewart, 2003).

Mental illness may increase the likelihood of committing violence in some individuals, but only a small proportion of violent crimes are actually committed by individuals with mental illness (Mulvey, 1994). A meta-analysis of murders of strangers by people with psychotic disorders found a rate of 1 murder per 140,000 persons with

schizophrenia; whereas the rate in the general population was 6.72 murders per 140,000

(Nielssen, et al., 2011; FBI, 2012). One study of individuals with SMI who were

convicted and sentenced for murder in Indiana, found they were approximately

responsible for 10% of all homicides, extrapolated that would be about 0.672 murders per

140,000 (Matejkowski, Cullen, & Solomon, 2008). This implies an increased risk for

those with schizophrenia compared to other SMIs, but not to the general population.

People with SMI are much more likely to be victims of violent crimes than the

perpetrators. One study found a rate of 168.2 incidents of violent victimization per 1,000

persons per year, more than four times greater than the rate in the general population

(Choe, Teplin, & Abram, 2008). Another study showed an 11-fold increase in

victimization for persons with SMI (Teplin, McClelland, Abram, & Weiner, 2005).

Research Methods

This study explored the relationship between history of crime and substance dependence in three groups of individuals with SMI (those with anxiety disorders, mood disorders, and schizophrenic spectrum disorders) who had recently used cocaine and were in treatment at community mental health centers in Connecticut. The specific research questions were:

1. How prevalent is history of violent crime among patients with mental illness in this study population?

2. Is a history of committing violent versus non-violent crimes associated more strongly with certain psychiatric diagnoses in this population?

3. Are certain types of co-occurring substance dependence associated with psychiatric diagnoses and a history of violent crimes?

Hypothesis

Of the three types of psychiatric diagnoses (anxiety disorders, mood disorders, and schizophrenic spectrum disorders) identified in this population, it is hypothesized that patients with schizophrenic spectrum disorders will have higher probabilities of history of violent crimes. Schizophrenic diagnoses include increased psychotic features, which are known to be an additional risk factor in violence (Fazel, Gulati, Linsell, Geddes, & Grann, 2009). Comorbidity with substance dependence is hypothesized to increase history of violent crimes across all diagnoses. Lastly, certain types of substance dependence, including alcohol, opioids and cocaine, will also increase the likelihood of a history of violent crime.

Study Population

The Abstinence Linked Money Management–Multi-site Study was a randomized clinical trial of 120 clients who received treatment at one of four community mental health centers in Connecticut. Clients who reported recent cocaine use and who received SSI or SSDI were randomly assigned to 36 weeks of treatment with either Advisor-Teller Money Manager (ATM) or individual drug counseling (IDC), a standardized cocaine abuse treatment, while continuing to meet regularly with their primary CMHC clinician. ATM therapy directly addressed engagement in HIV sexual risk behaviors, impulsivity and cocaine use via budgeting (Rosen, et al., 2012). In addition to addressing the money management aspects of substance use, the ATM therapist counseled clients to avoid high-risk sexual encounters and to use barrier protection. The main objectives of the ALMM study were to determine the efficacy of ATM for reducing cocaine use, engagement in unprotected sexual encounters, and on self-rated money mismanagement (Rosen, et al., 2012).

Study participants were recruited at Connecticut Mental Health Center in New Haven, Capitol Region Mental Health Center in Hartford, Western Connecticut Mental Health Center in Waterbury, and Greater Bridgeport Mental Health Center from 2009 through 2013. Recruitment was conducted in one of four ways: direct invitation by clinician, participation at team meetings, advertisement, and presentations to patients and staff at the various mental health centers. Direct invitation involved clinicians identifying eligible patients and referring them to the study (upon permission from the patient). Research assistants also participated at team meetings to identify eligible individuals. Advertisements, including brochures, flyers, and clinician flyers were posted at outpatient waiting areas and distributed during discussions with patients. Presentations to staff at

clinical team meetings were conducted to identify eligible participants. With the permission of both the patient and clinical staff, a member of the research team administered a screening assessment to determine if the patient met inclusion criteria. Upon meeting inclusion criteria, voluntary informed consent was obtained after the research procedures, risks associated with participation, and potential benefits had been reviewed in detail. Each participant was given a signed copy of the consent form (Rosen, et al., 2012).

Participants enrolled in ALMM met the criteria that they were 18 years of age or older, received SSI or SSDI payments, had used cocaine within the last 60 days as evidenced by either a positive toxicology screen or self-report, and were able to provide informed consent. Patients were excluded if they had a conservator, a history of violence towards clinical providers or predatory violence, suicidal or homicidal plans or intent, physiological dependence on alcohol, illicit opiates or illicit sedatives as evidenced by a history of four weeks of daily use of these substances, if they were not be able to complete the twelve months of the study, or unable to speak and understand English (Rosen, et al., 2012). A total 113 participants completed baseline assessments.

Human Subjects Protections

The Institutional Review Board (IRB) at the University of Connecticut Health Center determined that this secondary analysis was not human subjects research and there was no HIPAA risk. The de-identified dataset was received from Dr. Marc Rosen at Yale University School of Medicine and analyzed using the IBM SPSS statistics data package (IBM SPSS, 2012). However, the original ALMM study involved direct contact with human subjects for data collection and required voluntary informed consent. Due to the

vulnerable populations being recruited, who included the decisionally impaired and economically disadvantaged, additional safeguards in the form of integrated treatment in conjunction with a psychiatric provider was provided by study design. All research personnel adhered to HIPAA guidelines, and protecting personal health information (PHI).

Protections were in place to minimize the potential risks to participants, which included: a) subjects being given breaks during the test battery to minimize frustration, fatigue, and psychological discomfort, research staff being trained in administering these tests, use of standardized instruments and knowledgeable of cultural differences within the study population; b) subjects were given the choice not to answer a question if they did not want to and it was emphasized that participation was voluntary; c) the client could refuse the collection of urine or breathalyzer sample, and if a research subject disputed the results of the urine toxicology, the sample was sent to a commercial laboratory for further testing; d) a certificate of confidentiality was in place to minimize risk of disclosure; and e) the research staff was carefully trained not to breach client confidentiality, and all staff members were told that they could lose their jobs if they ever revealed information that was confidential (Rosen, et al., 2012).

A data and safety monitoring board reviewed study enrollment and data collection quarterly. All serious adverse events (SAE) and study related adverse events were reported; quarterly reports were filed based on study progress, enrollment and SAEs. Potential benefits associated with ALMM study participation were: patients received advice about how to stop using drugs and were provided information and education about how to better manage money and how to prevent spending money on drugs and alcohol.

Participants also received financial compensation for completing each bi-weekly study assessment to minimize the risk of relapse associated with receipt of large lump sum payments in this population. Also, in order to minimize the risk that the payments would be used to purchase drugs or alcohol, payments were in gift cards redeemable at one of several stores in the area (Rosen, et al., 2012).

Data Collection Methods

After confirming eligibility, participants completed a baseline assessment battery collected by the research assistant. Subsequent assessments with the research assistant occurred every other week for 36 weeks, and counseling was available, but not required, weekly. After week 36, participants completed monthly follow-up assessments with the research assistant (weeks 40, 44, 48, 52) (Rosen, et al., 2012).

All information collected after initial screening and consenting was maintained with non-identifying study codes and kept filed in a locked cabinet in the research office, accessible only to members of the research team. The members and staff of the Institutional Review Boards that approved the ALMM study had access, in addition to The United States Food and Drug Administration and the following research sponsors: Department of Health and Human Services (DHHS), National Institute on Drug Abuse (NIDA) (Rosen, et al., 2012).

This secondary data analysis of the ALMM Study addressed questions not considered in the original planned analysis. Data used for this analysis were taken from the baseline assessment battery before randomization and study interventions began.

Definition of Variables

The variables measured in this study include psychiatric diagnoses, history of crime, and diagnosis of substance dependence. The data used for this study were extracted from existing ALMM databases collected at baseline: (1) the demographics (see Appendix I); (2) the Addiction Severity Index (ASI) Version V, widely used to assesses the severity of substance use and related problems in the areas of medical, employment, legal, family/social, and psychiatric functioning. The ASI (see Appendix II) was used to determine history of violent and non-violent crimes as well as years of education. (3) The Structured Clinical Interview for DSM-IV (SCID) (see Appendix III) was used to obtain DSM-IV Axis I diagnoses of SMIs and substance dependence.

The dependent variable, self-reported history of crime, as measured by the ASI, was based on responses to the number of arrests and charges each participant ever had in response to a list of crimes (Appendix II). For this analysis, history of crime was divided into three categories according to the Federal Bureau of Investigation's definition of crime: having committed violent crimes, non-violent crimes, or no crimes. Participants who committed both violent and non-violent crimes were categorized as having committed a violent crime.

History of Crime:
- Violent Crimes: Robbery, Assault, Rape, and Homicide/Manslaughter

- Non-Violent Crimes: Shoplifting/Vandalism, Parole/Probation Violations, Drug Charges, Forgery, Burglary/Larceny/B&E, Prostitution, Contempt of Court, and Arson

- No Crime: No self-reported history of crime

The independent variable of psychiatric diagnosis was based on the research assistants'

ratings of either inadequate info, absent, sub-threshold, or threshold. These were recoded

to either threshold or not and then categorized into the three types of psychiatric

diagnoses: anxiety disorders, mood disorders, and schizophrenic spectrum disorders.

Psychiatric Diagnoses:
- Anxiety Disorders: (Panic Disorder, Agoraphobia, Social Phobia, Specific Phobia, Obsessive Compulsive Disorder, Post-Traumatic Stress Disorder, Generalized Anxiety Disorder, and Anxiety Disorder)

- Mood Disorders: (Bipolar I Disorder, Bipolar II Disorder, Other Bipolar Disorder, Major Depression, Dysthymia, Depressive Disorder, and Mood Disorder)

- Schizophrenic Spectrum Disorders: (Schizophrenia, Schizophreniform Disorder, Schizoaffective Disorder, Delusional Disorder, Brief Psychotic Disorder, Psychotic Disorder, and Psychotic Disorder NOS)

The substance dependence diagnoses were also rated as inadequate information,

absent, abuse, and dependence for a list of common substances, including alcohol, opioid,

and cocaine. These were recoded as either threshold for dependence or not.

Data Analysis Plan:

An ordinal logistic regression model was estimated, modeling crime as a function

of covariates of each psychiatric diagnosis and substance dependence. History of crime

was treated as an ordinal variable, with those who committed no crime (0), a non-violent

crime (1), and a violent crime (2). Psychiatric diagnosis and substance dependence were

treated as dichotomous variables, threshold (1), not (0). Estimates were ordered log-odds

(logit) regression coefficients. Proportional odds ratios were calculated from the ordinal

regression to determine the odds of committing the crime as a function of each predictor

variable.

Bivariate Spearman's rho correlations where conducted to measure any associations between history of violent and non-violent crime, the three groups of psychiatric diagnoses (anxiety, mood, and schizophrenic), and the three types of substance dependence diagnoses (alcohol, cocaine, and opioid). A two-tailed statistical significance was determined at the .05 level.

Results

Participant Demographic Characteristics

Data from 113 participants were analyzed in this study. Participant demographic characteristics are reported in Table 1. The mean age of all participants was 43.0 with a range of 19.0-63.0. A total of 54.9% of the participants were African American, 25.6% Caucasian, 13.3% Hispanic, 0.9% Native American and 5.3% self-identified as other. There were a total of 67 males (59.3%) and 46 (40.7%) females in the study. Education was measured in years (M=11.4, SD =1.9, R=7-16).

The majority (81.4%) of participants reported some history of past crime; 18.6% reported no crime committed, 44.2% reported committing a non-violent crime only, 23.9% reported committing a violent crime only, and 13.3% reported committing both non-violent and violent crimes. Those who committed both types of crime were classified as having committed a violent crime (37.2%).

The majority (59.3%) of participants were diagnosed with a schizophrenic spectrum disorder. These included 33.6% of participants who had a schizophrenic disorder only, 22.1% who had both anxiety and schizophrenic disorders, 1.8% who had both mood and schizophrenic disorders, and 1.8% of all participants had all three types of diagnoses. The remaining two disorders were also frequent within this study population, with 47.8% of all participants diagnosed with anxiety disorders and 37.2% with mood disorders. Fifty-three participants (46.9%) had co-occurring psychiatric diagnoses and five (4.4%) did not meet criteria for anxiety, mood, or schizophrenic disorders.

16

The majority (72.6%) of the participants had a cocaine dependence diagnosis with or without other substance dependence. Although participants in the ALMM study were all recent cocaine users, not all met criteria for cocaine dependence. Alcohol and opioid dependence diagnoses were quite common as well, including 53 (46.9%) and 24 (21.3%) participants respectively. Altogether, 50 (44.3%) participants had co-occurring substance dependence. Seventeen (15%) of participants did not meet criteria for alcohol, opioid, or cocaine dependence.

Associations between Crime, Psychiatric Diagnoses and Substance Diagnoses

Spearman's bivariate correlations were calculated to determine associations between the two crime types, three psychiatric diagnoses and three substance dependence diagnoses (Table 2). First, the relationship between the various diagnoses and crime was examined. There were no statistically significant associations between anxiety disorders and non-violent crime ($r = 0.12$, $p = 0.20$) or violent crimes ($r = -0.04$, $p = 0.69$). Nor were any statistically significant associations seen between mood disorders and non-violent crimes ($r = 0.02$, $p = 0.88$) or violent crimes ($r = 0.14$, $p = 0.13$). There was no relationship between schizophrenic spectrum disorders and non-violent crimes ($r = 0.01$, $p = 0.89$) or violent crimes ($r = -0.09$, $p = 0.33$) as were hypothesized.

Opioid dependence was positively related to non-violent crime ($r = 0.17$, $p = 0.073$). However there was no relationship between opioid dependence and violent crimes ($r = 0.14$, $p = 0.14$). There were no statistically significant associations between alcohol dependence and non-violent crime ($r = -0.08$, $p = 0.40$) or violent crimes ($r = 0.05$, $p = 0.57$), nor was there an association between cocaine dependence and non-

violent crimes (r = -0.04, p = 0.70) and or between cocaine dependence and violent crime

(r = 0.07, p = 0.44). There was a statistically significant positive association between

history of committing a violent crime and history of committing a non-violent crime (r =

0.22, p = 0.020).

A statistically significant positive association between alcohol dependence and

anxiety disorders was observed (r = 0.20, p = 0.032). A trend towards significance was

seen between alcohol dependence and mood disorders (r = 0.16, p = 0.095), and between

alcohol dependence and schizophrenic disorders (r = -0.16, p = 0.091). Opioid

dependence had a statistically significant, positive relationship with anxiety disorders (r =

0.24, p = 0.011), but no relationship with mood disorders (r = 0.09, p = 0.33) or

schizophrenic disorders (r = -0.05, p = 0.57). Cocaine dependence was negatively

associated with anxiety disorders (r = -0.17, p = 0.079), but there was no association with

mood disorders (r = 0.06, p = 0.51). There was a statistically significant negative

relationship between cocaine dependence and schizophrenic disorder (r = -0.19, p =

0.048).

Ordinal Logistic Regression

An ordinal logistic regression was performed with history of crime as the outcome

measure and the three types of psychiatric diagnoses and three substance dependence

diagnoses as the predictors. As can be seen in Table 3, the predictor variables, anxiety,

mood and schizophrenic disorders and alcohol, opioid and cocaine dependence, were not

statistically significantly related to crime.

The ordered log-odds estimates (β) were determined for each predictor variable, estimating the relationship between diagnosis and probability of crime, holding the other variables constant in the model. The ordered logit for participants with anxiety disorders having committed violent crimes is 0.24 more than those without anxiety disorders when the other variables in the model are held constant. However, the odds ratio and the Wald test statistic for the predictor anxiety disorders were 1.27 and 0.34, respectively with an associated p-value of 0.56, and as such we failed to reject the null hypothesis and concluded that the regression coefficient for anxiety disorders was not statistically different from zero in estimating crime given the other variables in the model. All the other predictor variables were also found not to be statistically significant: mood disorders (β = -0.81, OR = 0.44, χ^2 = 1.70, p = 0.19), schizophrenic spectrum disorders (β = -0.29, OR = 0.75, χ^2 = 0.22, p = 0.64), alcohol dependence (β = -0.12, OR = 0.89, χ^2 = 0.09, p = 0.77), opioid dependence (β = -0.83, OR = 0.44 χ^2 = 2.47, p = 0.12), and cocaine dependence (β = -0.16, OR = 0.85, χ^2 = 0.13, p = 0.72).

Discussion

The purpose of this paper was to look more closely at the extent to which psychiatric and substance dependence diagnoses were related to committing crimes and violence. The secondary analysis of the ALMM study data indicated that the various psychiatric diagnoses, anxiety, mood and schizophrenia-spectrum, were not associated with committing either non-violent or violent crimes. Most of these correlations were small and not statistically significant, thus it can be concluded that these diagnoses were not associated with a history of crimes committed. These results add to the current literature, which remains inconsistent regarding the association between SMI and violent crimes (Appelbaum, 2013). The results from this and many other studies indicate that SMI does not predict violent crimes (Langan, 2010).

Opioid dependence was weakly related to an increase in the likelihood of committing non-violent crimes. The data also showed that those who committed non-violent crimes were more likely to commit violent crimes. This is consistent with other studies that reported a positive relationship between first conviction and the number of subsequent convictions (Loza, 2003).

Other comorbidities were observed among and between the various psychiatric and substance diagnoses. Anxiety disorders were noteworthy, as they showed an association with all three substance dependence diagnoses in this analysis. People with anxiety disorders were more likely to have an alcohol dependence and/or opioid dependence, and tended to be less likely to have cocaine dependence. Participants with

schizophrenic disorders were less likely to have a co-occurring diagnosis of cocaine and alcohol dependence.

The ordinal regression analysis to predict history of crime showed that psychiatric diagnoses and substance use disorders did not predict crime history among SMI clients who used cocaine. This provides evidence refuting the notion that people with specific psychiatric and substance dependence diagnoses are more likely to have committed violent crimes (Swanson, Holzer, Ganju, & Jono, 1990). Knowing this conclusion with adequate consensus can have great ramifications upon current beliefs and policies aimed specifically at this presumed link. Therefore more research is needed to better address this link.

Limitations

There were certain limitations to this study that should be noted. First, the sample for this study was very specific and limited the generalizability of the results due to the inclusion/exclusion criteria of the primary study. The study recruited participants who were receiving treatment in community mental health centers and all participants were required to have used cocaine within the last 60 days to be eligible. Further, those who had a history of violence towards clinical staff or predatory violence and/or suicidal and homicidal plans or intent were excluded, which may limit the variability of the crime measurement. This was necessary for the original study as participants that exhibited these behaviors were a potential threat to study personnel. In terms of the purpose of this study, excluding these individuals may limit the generalizability of results. Those with physiological dependence on alcohol, opiates, and sedatives were excluded; excluding

these individuals also limits the generalizability of the findings. Finally, those not able to complete the entire study due to incarceration were also excluded. This clearly impacted the results of this study, as the main outcome of interest was commitment of crime.

Violence was measured only in terms of self-reported past criminal history, limiting the scope of violence measured. Only crimes that a participant had been arrested and charged for were measured, however, there may be many other crimes for which they were never arrested or charged. All data were self-reported and were not verified, which can lead to inaccuracy of the data. Considering the population of participants, the chances of recall and information biases on self-report are high (Meszarosa, et al., 2011). Most importantly, the use of secondary data limited survey design and the variables being measured. Analysis was restricted to the variables as selected and measured for the ALMM Study, which was designed for another purpose.

Future Research

Future research in this area will need to better address such limitations, and emphasis on incorporating better measures of crime including contextual data. Aims should focus on collecting more details on the types and number of crimes as well as circumstantial data that pertain to the time surrounding each crime, which allows capturing each person's frame of mind at that specific time. Knowing the person's age, use of substances, present psychotic features and past history at the time of committing a crime will allow researchers to control for more confounding, as well as establish stronger associations. Also, a more objective measure of crime occurrence should be used.

Populations for future research should be less restricted, and include samples of populations that are currently in treatment as well as those who are not. Including severely mentally ill individuals with history of violence towards clinical staff or predatory violence and/or suicidal and homicidal plans or intent, physiological dependence on alcohol, opiates, and sedatives, and those who become incarcerated will increase variability of crime and overall generalizability to populations of people with SMI. Also, further research needs to be done to examine the roles of comorbidities on the risk of violence in the general population compared to those in populations of SMI.

Conclusion

There are widespread stereotypes about mental illnesses and violence that often deter people from self-identifying as having mental problems and seeking behavioral healthcare. Research shows, however, that only a small share of violence toward others is attributable to mental disorder, so policies aimed exclusively at people who experience mental disorders to safeguard against violence are unlikely to lead to significant increases in public safety (Appelbaum, 2013). There needs to be a better understanding of the relationship between SMI and risk of violent behavior to provide the data necessary for developing and implementing the most effective policies and treatments for those at risk. The available research studies are not only inconsistent in their conclusions, but they lack the consensus on which to base policies and public health practices.

The results of this study provide further support that specific diagnoses among people in treatment for SMI may not be sufficient enough to predict history of violent crime. Also substance dependence does not significantly increase the risk of violent

crimes. This study addressed a specific population with SMI currently in treatment; therefore the results can only be generalized to that population.

Table 1: Participant Demographic Data

	N	Percentage	Mean (Range)
Age	113		43.0 (19-63)
Race/Ethnicity			
African American	62	54.9%	
Caucasian	29	25.6%	
Hispanic	15	13.3%	
Native American	1	0.9%	
Other	6	5.3%	
Gender			
Male	67	59.3%	
Female	46	40.7%	
Year of Education	113		11.4 (7-16)
History of Crime			
None	21	18.6%	
Non-Violent only	50	44.2%	
Violent only	27	23.9%	
Non-Violent and Violent	15	13.3%	
Psychiatric Diagnoses			
None	5	4.4%	
Anxiety Disorders Only	3	2.7%	
Mood Disorders Only	14	12.4%	
Schizophrenic Spectrum Disorders Only	38	33.6%	
Anxiety and Mood	24	21.2%	
Anxiety and Schizophrenic	25	22.1%	
Mood and Schizophrenic	2	1.8%	
All Three	2	1.8%	
Substance Dependence Diagnoses			
None	17	15.0%	
Alcohol Only	11	9.7%	
Opioid Only	3	2.7%	
Cocaine Only	32	28.3%	
Alcohol and Cocaine	29	25.7%	
Opioid and Cocaine	8	7.1%	
All Three	13	11.5%	

Table 2: Correlation Matrix for Association between Crime Type, Psychiatric Diagnoses and Substance Dependence Diagnoses

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) History of Committing a Nonviolent Crime	Correlation Coefficient	1.000							
	Sig. (2-tailed)								
(2) History of Committing a Violent Crime	Correlation Coefficient	.219[**]	1.000						
	Sig. (2-tailed)	.020							
(3) Anxiety Disorders	Correlation Coefficient	.122	-.038	1.000					
	Sig. (2-tailed)	.199	.689						
(4) Mood Disorders	Correlation Coefficient	.015	.142	.217[**]	1.000				
	Sig. (2-tailed)	.875	.133	.021					
(5) Schizophrenic Spectrum Disorders	Correlation Coefficient	.013	-.093	-.181[*]	-.779[***]	1.000			
	Sig. (2-tailed)	.888	.330	.055	.000				
(6) Alcohol Dependence	Correlation Coefficient	-.080	.054	.201[**]	.158[*]	-.160[*]	1.000		
	Sig. (2-tailed)	.397	.568	.032	.095	.091			
(7) Opioid Dependence	Correlation Coefficient	.169[*]	.140	.240[**]	.093	-.054	.076	1.000	
	Sig. (2-tailed)	.073	.140	.011	.327	.569	.426		
(8) Cocaine Dependence	Correlation Coefficient	-.037	.074	-.166[*]	.062	-.186[**]	.141	.174[*]	1.000
	Sig. (2-tailed)	.695	.439	.079	.511	.048	.137	.066	

Values shown in the matrix are Spearman's correlation coefficients. * Significant at the 0.10 level (2-tailed); **Significant at the 0.05 level (2-tailed); ***Significant at the 0.01 level (2-tailed); (N=113)

Table 3: Results of Ordinal Logistic Regression Analysis [a]

Predictors	df	β	SE	χ^2_{Wald}	P value	OR	95% CI
Intercept 1	1	- 2.802	0.801	12.233	0.000		
Intercept 2	1	- 1.582	0.770	4.221	0.040		
Anxiety Disorders	1	0.239	0.414	0.335	0.563	1.271	0.565-2.859
Mood Disorders	1	- 0.812	0.622	1.703	0.192	0.444	0.131-1.503
Schizophrenic Disorders	1	- 0.289	0.610	0.224	0.636	0.749	0.227-2.476
Alcohol Dependence	1	- 0.116	0.389	0.089	0.766	0.890	0.415-1.910
Opioid Dependence	1	- 0.831	0.529	2.467	0.116	0.435	0.154-1.229
Cocaine Dependence	1	- 0.160	0.444	0.130	0.718	0.852	0.357-2.033

[a] 38 cells have zero frequencies; df, degrees of freedom; β, ordered log-odds estimates; SE, standard error; χ^2_{Wald}, Wald's chi-square; OR, odds ratio; CI, confidence interval; (N=113); significance measured at 95%

References

Appelbaum, P. (2013). Public safety, mental disorders, and guns. *JAMA Psychiatry , 70* (6), 565-566.

Ballester, J., Goldstein, B., Goldstein, T., Yu, H., Axelson, D., Monk, K., et al. (2013). *Bipolar Disord.*

Bradford, J. M. (2008). Violence and mental disorders. *Canadian Journal of Psychiatry. Revue Canadienne De Psychiatrie. , 53* (10), 635-636.

Choe, J. Y., Teplin, L. A., & Abram, K. M. (2008). Perpetration of violence, violent victimization, and severe mental illness: Balancing public health concerns. *Psychiatric Services (Washington, D.C.) , 59* (2), 153-164.

Faria, J., & A., M. (2013). Shooting rampages, mental health, and the sensationalization of violence . *Surgical Neurology International , 4* (Suppl 1), 16.

Fazel, S., & Grann, M. (2006). The Population Impact of Severe Mental Illness on Violent Crime. *Am J Psychiatry , 163* (8), 1397-1403.

Fazel, S., Gulati, G., Linsell, L., Geddes, J. R., & Grann, M. (2009). Schizophrenia and violence: Systematic review and meta-analysis. *PLoS Medicine , 6* (8), e1000120.

FBI. (2012). *Crime in the United States 2012*. Retrieved April 18, 2014, from Uniform Crime Rates: http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/tables/16tabledatadecpdf

Hoaken, P. N., & Stewart, S. H. (2003). Drugs of abuse and the elicitation of human aggressive behavior. . *Addictive Behaviors , 28* (9), 1533-1554.

Hooghe, M., Vanhoutte, B., Hardyns, W., & Bircan, T. (2011). UNEMPLOYMENT, INEQUALITY, POVERTY AND CRIME: Spatial Distribution Patterns of Criminal Acts in Belgium, 2001–06. *Brit. J. Criminol , 51*, 1-20.

IBM SPSS. (2012). IBM SPSS Statistics [computer program] Version 21. Armonl, NY, US: IBM Corp.

Langan, J. (2010). Challenging assumptions about risk factors and the role of screening for violence risk in the field of mental health. *Health Risk & Society , 12* (2), 85-100.

Loza, W. (2003). Predicting violent and nonviolent recidivism of incarcerated male offenders. *Aggression and Violent Behavior , 8* (2), 175-203.

Matejkowski, J., Cullen, S., & Solomon, P. (2008). Characteristics of Persons With Severe Mental Illness Who Have Been Incarcerated for Murder. *J Am Acad Psychiatry Law , 3* (1), 74-86.

Meszarosa, •., Dimmocka, J., Ploutz-Snyderb, R., Singh-Chauhana, V., Abdul-Malaka, Y., Middleton, F., et al. (2011). Accuracy of self-reported medical problems in patients with alcohol dependence and co-occurring schizophrenia or schizoaffective disorder. *Schizophrenia Research , 132* (2-3), 190-193.

Mulvey, E. (1994). Assessing the evidence of a link between mental illness and violence. *Hosp Community Psychiatry , 45*, 663-668.

Narrow, W. E., Regier, D. A., Goodman, S. H., Rae, D. S., Roper, M. T., Bourdon, K. H., et al. (1998). A Comparison of Federal Definitions of Severe Mental Illness Among Children and Adolescents in Four Communities. *Psychiatric Services , 49* (12), 1601-1608.

National Institute of Mental Health . (2005). *Statistics*. Retrieved from NIH: http://www.nimh.nih.gov/statistics/index.shtml.

Nielssen, O., Bourget, D., Laajasalo, T., Liem, M., Labelle, A., Häkkänen-Nyholm, H., et al. (2011). Homicide of strangers by people with a psychotic illness. *Schizophrenia Bulletin , 37* (3), 572-579.

Reeves, W., & al., e. (2011). Mental Illness Surveillance Among Adults in the United States. *MMWR , 60* (3), 1-32.

Rogers, M., & Pridemore, W. (2013). The effect of poverty and social protection on national homicide rates: Direct and moderating effects. *Social Science Research , 42* (3), 584–595.

Rosen, M., Ablondi, K., & al., e. (2012). *Abstinence Linked Money Management – Multi-site Study Protocol. Version 6.* New Haven: Yale IRB.

Rueve, M. E., & Welton, R. S. (2008). Violence and mental illness. *Psychiatry (Edgmont (Pa.: Township)) , 5* (5), 34-48.

Shern, D., & Lindstrom, W. (2013). After Newtown: Mental illness and violence. *Health Affairs (Project Hope) , 32* (3), 447-450.

Stanton, B., Baldwin, R. M., & Rachuba, L. (1997). A quarter century of violence in the United States: an epidemiologic assessment. *Psych Clin N Am. , 20*, 269-282.

Swanson, J., Holzer, C., Ganju, V., & Jono, R. (1990). Violence and psychiatric-disorder in the community - evidence from the epidemiologic catchment-area surveys. . *Hospital and Community Psychiatry , 41* (7), 761-770.

Teplin, L. A., McClelland, G. M., Abram, K. M., & Weiner, D. A. (2005). Crime victimization in adults with severe mental illness: Comparison with the national crime victimization survey. *Archives of General Psychiatry , 63* (8), 911-921.

Volavka, J., & Swanson, J. (2010). Violent behavior in mental illness: The role of substance abuse. *JAMA: The Journal of the American Medical Association , 304* (5), 563-564.

Appendix I: Demographics Teleform

Client Number [ ][ ][ ] *CLNUM*   Week in Study [ ][ ] *WKS*

Interview Date [ ] / [ ] / [ ][ ] *IDATE*   Rater Code [ ][ ] *RCODE*

Complete this questionnaire at the Screening Interview.

1. Age   Years [ ][ ]
   Dem1

2. Race/Ethnicity   1 O Native American or Alaskan
   Dem2   2 O Asian
                      3 O African American/Black/Not of Hispanic Origin
                      4 O Hispanic or Latino
                      5 O Caucasian/White/Not of Hispanic Origin
                      6 O Native Hawaiian or Other Pacific Islander
                      7 O Other/Unknown

3. Gender.   O Male   O Female
   Dem3   1   0

Appendix II: ASI Teleform

Client Number ☐☐☐☐   Week in Study ☐☐

EMPLOYMENT/SUPPORT STATUS

1. Education Completed... ☐☐ *emp1* years ☐☐ *emp1a* months (0-11)
   (GED=12 years)

2. Training or technical education completed...................................... ☐☐ *emp2* months (0-99)

3. Do you have a profession, trade, or skill?.. ○ No ○ Yes *emp3*

4. Do you have a valid driver's license?.. ○ No ○ Yes *emp4*

5. Do you have an automobile available for use?............................... ○ No ○ Yes *emp5*
   (answer no if no valid driver's license)

6. How long was your longest full-time job?.. ☐☐ *emp6* years ☐☐ *emp6a* months (0-11)

8. OCCUPATIONAL LEVEL:

   1 ○ Higher executive, or major professional: bank president, engineer
   2 ○ Business manger or lesser professional: prop of medium size business, R.N.
   3 ○ Administrative or minor professional: small business owner, landscape planner
   4 ○ Clerical/sales or technicians: book keeper, street vendor
   5 ○ Skilled manual employee: gardener, L.P.N.
   6 ○ Machine operators, semi-skilled employees: bartender, nurses aide, taxi driver, waitress, welder, stock clerk _ *emp8*
   7 ○ Unskilled employee: janitor, laborer
   8 ○ Student
   9 ○ Housewife (primary caretaker of children)
   10 ○ Welfare recipient, chronic unemployed

9. Does someone contribute to your support in any way?................... ○ No ○ Yes *emp9*

10. Does this constitute the majority of your support?......................... ○ No ○ Yes *emp10*

11. Usual employment pattern, past 3 years:

    1 ○ Full time (40 hrs/wk)   4 ○ Student   7 ○ Unemployed   *emp11*
    2 ○ Part-time (reg. hours)   5 ○ Service   8 ○ In controlled environment
    3 ○ Part-time (irregular)   6 ○ Retired/Disability

12. How many days were you paid for working in the past 28? ☐☐
    (Include under the table work).. days *emp12*

AS OF 02/05/10 AB

62795

32

Client Number ☐☐☐   Week in Study ☐☐

LEGAL STATUS

1. Was this admission prompted or suggested by the criminal justice system (judge, probation/parole officer)?... O No   O Yes   legal1

2. Are you on probation or parole?.. O No   O Yes   legal2

How many times in your life have you been arrested and charged with the following:

03. Shoplifting or vandalism.. ☐☐   legal3

04. Parole or probation violations.. ☐☐   legal4

05. Drug charges... ☐☐   legal5

06. Forgery.. ☐☐   legal6

07. Weapon offense... ☐☐   legal7

08. Burglary, larceny, B&E... ☐☐   legal8

09. Robbery... ☐☐   legal9

10. Assault... ☐☐   legal10

11. Arson... ☐☐   legal11

12. Rape.. ☐☐   legal12

13. Homicide, manslaughter... ☐☐   legal13

14a. Prostitution... ☐☐   legal14a

14b. Contempt of court... ☐☐   legal14b

14c. Other... ☐☐   legal14c

15. How many of these charges resulted in conviction?(do not count items 16-18)........ ☐☐   legal15

AS OF 02/05/10 AB

62795

33

Appendix III: SCID Teleform

MM Multi Site SCID-IP

Client Number [ ][ ][ ] *CLNUM*

Interview Date [ ][ ] / [ ][ ] / [ ][ ][ ] *IDATE*

Rater Code [ ][ ] *RCODE*

Week in Study [ ][ ] *WKS*

01 Bipolar I Disorder (D. 1)

Inadequate Info	Absent	Sub-threshold	Threshold
O ? (5)	O 1	O 2	O 3

Scid1

1 Single manic episode O

2 Recurrent O — *scid1b*

0 Without Rapid Cycling O

1 With Rapid Cycling O — *Scid1c*

0 Without Seasonal Pattern O

1 With Seasonal Pattern O — *Scid1d*

(Only if not current)

6 In Partial Remission O

7 In Full Remission O — *scid1e*

Meets Symptomatic Diagnostic Criteria
Past Month

Absent	Present
O 1	O 3

Scid1a

Current episode
1 O manic
2 O mixed
3 O hypomanic
4 O major depressive
5 O unspecified

Scid1f

If major depressive:
0 O Neither Melancholic, Atypical, or Catatonic
1 O Melancholic
2 O Atypical
3 O Catatonic

scid1g

Current Severity
1 O mild
2 O moderate
3 O severe, without psychotic features
4 O with mood-congruent psychotic features
5 O with mood-incongruent psychotic features

scid1h

Client Number ☐☐☐☐ Week in Study ☐☐

---

02 Bipolar II Disorder (D. 2)

Inadequate Info	Absent	Sub-threshold	Threshold
O ?	O 1	O 2	O 3 scid 2

0 Without Rapid Cycling O

1 With Rapid Cycling O scid2b

0 Without Seasonal Pattern O scid 2c

1 With Seasonal Pattern O

(Only if not current)

6 In Partial Remission O scid 2d

7 In Full Remission O

Meets Symptomatic Diagnostic Criteria Past Month

Absent	Present
O 1	O 3 scid 2a

Current episode

1 O hypomanic

2 O major depressive scid 2e

If major depressive:

0 O Neither Melancholic, Atypical, or Catatonic

1 O Melancholic

2 O Atypical scid 2f

3 O Catatonic

Current Severity

1 O mild scid 2g

2 O moderate

3 O severe, without psychotic features

4 O with mood-congruent psychotic features

5 O with mood-incongruent psychotic features

---

03 Other Bipolar Disorder (D. 5)

Inadequate Info	Absent	Sub-threshold	Threshold
O ?	O 1	O 2	O 3 scid3

1 O Cyclothymic Disorder

2 O Intermittent hypomanic episodes

3 O Manic or hypomanic episodes superimposed on Psychotic Disorder

4 O Bipolar Disorder NOS with subthreshold manic episodes

5 O Other

Meets Symptomatic Diagnostic Criteria Past Month

Absent	Present
O 1	O 3 scid 3a

scid3b

Client Number ☐☐☐

Week in Study ☐☐

---

04 Major Depression (D.6)

Inadequate Info	Absent	Sub-threshold	Threshold
?	1	2	3
O	O	O	O

scid4

Meets Symptomatic Diagnostic Criteria
Past Month

Absent	Present
1	3
O	O

scid4a

1 Single episode O   scid4b
2 Recurrent   O

⁰ Without Seasonal Pattern O   scid4c
I With Seasonal Pattern   O

(Only if not current)

φ In Partial Remission O   scid4d
7 In Full Remission   O

Type of Current Episode
0 O Neither Melancholic, Atypical, or Catatonic

I O Melancholic
2 O Atypical   scid4e
3 O Catatonic

Current Severity
I O mild
2 O moderate   scid4f
3 O severe, without psychotic features
4 O with mood-congruent psychotic features
5 O with mood-incongruent psychotic features

---

05 Dysthymia (current only) (A.41)

Inadequate Info	Absent	Sub-threshold	Threshold
O ?	O 1	O 2	O 3

scid5

I O Early onset   scid5a
2 O Late onset

0 O Without Atypical Features   scid5b
I O With Atypical Features

Client Number ☐☐☐   Week in Study ☐☐

	Inadequate Info	Absent	Threshold		Absent	Present	

06 Depressive Disorder Not otherwise Specified (D.9)

				Absent 1	Present 3	
				○	○ scid6a	

? 1 3
○ ○ ○ scid6

1 ○ Postpsychotic Depressive Disorder of Schizophrenia

2 ○ Major Depressive Episode superimposed on Psychotic Disorder

3 ○ Premenstrual dysphoric disorder

4 ○ Minor depressive disorder   scid6b

5 ○ Recurrent brief depressive disorder

6 ○ Other

07 Mood Disorder Due to a General Medical Condition (A. 44)   Specify:_____

[?   1   3]   [1   3]
   ○   ○   ○   ○   ○
        scid7   scid7a

1 ○ With major depressive-like episode

2 ○ With depressive features

3 ○ With manic features   scid7b

4 ○ With mixed features

08 Substance-Induced Mood Disorder (A.46)   Specify:_____

?   1   3   1   3
○   ○   ○ scid8   ○   ○ scid8a

1 ○ With depressive features

2 ○ With manic features   scid8b

3 ○ With mixed features

Client Number ☐☐☐☐   Week in Study ☐☐

| Inadequate Info | Absent | Sub-threshold | Threshold | | Absent | Present | |

09 Schizophrenia (C.5)

O ?   O 1   O 2   O 3 scid9   O 1   O 3 scid9a

Past Month type:

[O Paranoid type   O Catatonic type   O Disorganized type   O Undifferentiated type   O Residual type] scid9b
       1   2   3   4   5

10 Schizophreniform Dis. (C. 11)

O ?   O 1   O 2   O 3 scid10   O 1   O 3 scid10a

[O With good prognostic features   O Without good prognostic features]
              1   2   scid10b

11 Schizoaffective Dis. (C. 14)

O ?   O 1   O 2   O 3 scid11   O 1   O 3 scid11a

[O Depressive type   O Bipolar type] scid11b
         1   2

12 Delusional Disorder (C. 16)

[O ?   O 1   O 2   O 3]   [O 1   O 3]
                        scid 12   scid12a

13 Brief Psychotic Disorder (C. 18)

O ?   O 1   O 2   O 3   O 1   O 3
                   scid13   scid13a

14 Psychotic Disorder Due to a General Medical Condition (C. 20)   Specify:_____

[O ?   O 1   O 3]   [O 1   O 3] scid14a
scid14   [O With delusions   O Without hallucinations] scid14b
                                                   1   2

15 Substance Induced Psychotic Disorder (C. 22)   Specify:_____

[O ?   O 1   O 3]   [O 1   O 3] scid15a
                   scid15   [O With delusions   O Without hallucinations]
                                                   1   2   scid15b

16 Psychotic Disorder NOS (C. 23)

[O ?   O 1   O 3]   [O 1   O 3]
                   scid16   scid16a

10249

Client Number ☐ ☐ ☐ ☐   Week in Study ☐ ☐

Psychoactive substance use disorder

	Inadequate Info	Absent	Abuse	Dependence	Absent	Present
	?	1	2	3	1	3
17 Alcohol (E.3/E.6)	O	O	O	O scid17	O	O scid17b
18 Sedative-Hypnotic-Anxiolytic (E.22/E.16)	? O	1 O	2 O	3 O scid18	1 O	3 O scid18b
19 Cannabis (E.22/E.16)	? O	1 O	2 O	3 O scid19	1 O	3 O scid19b
20 Stimulant (E.22/E.16)	? O	1 O	2 O	3 O scid20	1 O	3 O scid20b
21 Opioid (E.22/E.16)	? O	1 O	2 O	3 O scid21	1 O	3 O scid21b
22 Cocaine (E.22/E.16)	? O	1 O	2 O	3 O scid22	1 O	3 O scid22b
23 Hall./PCP (E.22/E.16)	? O	1 O	2 O	3 O scid23	1 O	3 O scid23b
24 Poly Drug (E.16)	? O	1 O		3 O scid24	1 O	3 O scid24b
25 Other (E.22/E.16)	? O	1 O	2 O	3 O scid25	1 O	3 O scid25b

Client Number ☐☐☐ Week in Study ☐☐

	Inadequate Info	Absent	Sub-threshold	Threshold	Meets Symptomatic Diagnostic Criteria Past Month Absent	Present

26 Panic Disorder (F. 3)

?	1	2	3	1	3
O	O	O	O	O	O scid26a

1 ⎡ O without Agoraphobia ⎤ scid26b
2 ⎣ O with Agoraphobia ⎦ scid26

27 Agoraphobia without History of Panic Disorder (AWOPD)

?	1	2	3	1	3
O	O	O	O scid27	O	O scid27a

28 Social Phobia (F.14)

?	1	2	3	1	3
O	O	O	O scid28	O	O scid28a

29 Specific Phobia (F.18)

?	1	2	3	1	3
O	O	O	O scid29	O	O scid29a

30 Obsessive Compulsive (F.23)

?	1	2	3	1	3
O	O	O	O scid30	O	O scid30a

31 Posttraumatic Stress (F.29)

?	1	2	3	1	3
O	O	O	O scid31	O	O scid31a

32 Generalized Anxiety (Current only) (F.34)

?	1	2	3
O	O	O	O scid32

33 Anxiety Disorder Due To a General Medical Condition (F.37)

⎡?	1	3⎤ scid33	⎡1	3⎤ scid33a
⎣O	O	O⎦	⎣O	O⎦

⎡ O With Generalized Anxiety   O With Panic Attacks   O With Obsessive-Complusive Symptoms ⎤ scid33b
    1   2   3

34 Substance-Induced Anxiety Disorder (F.39)

?	1	3	1	3
O	O	O scid34	O	O scid34a

1 O With Generalized Anxiety

2 O With Panic Attacks

3 O With Obsessive-Complusive Symptoms   scid34b

4 O With Phobic Symptoms

10249

Client Number ☐☐☐   Week in Study ☐☐

---

[1] Clinically significant symptoms with uncertain relationship to substance dependence or abuse.

Principal Axis I Diagnosis (i.e., the disorder that is (or should be) the main focus of curent clinical attention).

Enter code number from left of diagnosis above: ⌞__,__⌟   scid 46
Note: Code 00 if no current Axis I disorder. Code 99 if unknown.

Interviewer's Diagnosis, if different from SCID Diagnosis:

Scid 47