Article

Reconsidering the Criminalization Debate: An Examination of the Predictors of Arrest Among People With Major Mental Disorders

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Abstract
It is widely accepted that individuals with major mental disorders are arrested at significantly higher rates when compared with non-disordered individuals. However, theoretical consensus regarding the cause of the arrest disparity still eludes researchers today. Two prevailing perspectives have dominated the debate—criminalization and criminality. Criminalization proponents argue the arrest disparity results from structural forces in society that have increasingly caused persons with mental disorders to come into contact with the justice system. Criminality proponents argue that the source of the disparity is the increased criminal behavior of persons with mental disorders. This study tests competing hypotheses drawn from these two perspectives. We analyze data from a sample of individuals recently released from psychiatric hospitals and a comparison sample of individuals from the same communities.

Implications of this research and suggestions for future research are discussed.

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Introduction

As Abramson (1972) coined the phrase "the criminalization of mental illness," evidence that individuals with major mental disorders are disproportionately involved in the criminal justice system has amassed (Hiday & Burns, 2010; Lurigio, 2012). Researchers have estimated that individuals with major mental disorders are 10% to 20% more likely to be arrested than non-disordered individuals (Lurigio, 2012; Markowitz, 2011; Skeem, Manchak, & Peterson, 2011). This susceptibility toward arrest is reflected in the jail and prison populations. According to Lamb, Weinberger, and Gross (2004), individuals with major mental disorders comprise approximately 10% to 15% of the inmate population in state and federal jails and prisons—a prevalence rate Markowitz (2011) estimates to be 4 times greater than the prevalence of mental disorder in the general population. This disparate representation of individuals with major mental disorders in the criminal justice system is both disturbing and problematic. Once incarcerated, compared with non-disordered individuals, individuals with major mental disorders experience longer jail stays (McPherson, 2008; Solomon & Draine, 1995), are more likely to be victimized by other inmates and staff (Kondo, 2000), are more likely to violate institutional rules (Ditton, 1999; Torrey, Kennard, Eslinger, Lamb, & Pavle, 2010), and have higher rates of recidivism (Teplin, Abram, & McClelland, 1997).

Two theoretical perspectives have been offered to explain the disproportionate criminal justice involvement of individuals with major mental disorders—the criminalization hypothesis and the criminality thesis (Hiday & Burns, 2010). The criminalization perspective asserts, holding all else constant, individuals with major mental disorders are more likely to be arrested than non-disordered individuals (Lamb & Weinberger, 1998; Lamb, Weinberger, & DeCuir, 2002; Markowitz, 2011, 2006; Teplin, 1990). Researchers favoring criminalization explanations contend, once the general risk factors for arrest common among all offenders are controlled, extralegal factors unique to individuals with major mental disorders further increase their risk of arrest (Hiday & Burns, 2010; Hirschfield, Maschi, White, Traub, & Loeber, 2006). As applied to risk factors, the term extralegal refers to system, clinical, police officer level, and situational factors that extend beyond the authority of the law. As such, the ability of any of these factors to predict arrest in samples of individuals with major mental disorders is evidence this population has been criminalized.

Despite strong empirical evidence for the criminalization perspective, researchers favoring the criminality perspective have issued a number of theoretical challenges to the long-standing criminalization hypothesis. The criminality perspective maintains that individuals with major mental disorders are disproportionately drawn into the criminal justice system because they have a greater propensity for violence and criminal behavior, possess a greater number of general risk factors for arrest, and are more likely to behave disrespectfully and defiantly during encounters with police (Engel & Silver, 2001; Fisher et al., 2011; Hiday & Burns, 2010; Hirschfield et al., 2006; Junginger, Claypoole, Laygo, & Crisanti, 2006; Novak & Engel, 2005; Skeem et al., 2011).

Researchers favoring criminality explanations argue that the ability of extralegal factors to predict arrest disappears when legally relevant and encounter-level factors are controlled (Engel & Silver, 2001; Novak & Engel, 2005). Examples of factors legally relevant to the arrest incident include the nature and seriousness of the offense committed and prior criminal history. Encounter-level factors are situational factors that influence police officers' perceptions or limit police officers' discretion. Moreover, these legally relevant and encounter-level factors similarly predict arrest in non-disordered samples (Engel & Silver, 2001). Criminality proponents argue that much of the research evidencing criminalization has failed to control for legally relevant and encounter-level factors. As such, criminalization is an erroneous conclusion based on "spurious" findings (Novak & Engel, 2005, p. 498).

In this study, we revisit the often contentious criminalization versus criminality debate by testing competing hypotheses. Resolution of the debate is important because of the ability of these theoretical perspectives to shape and drive policy and treatment protocols. First we juxtapose the criminalization perspective's primary assertion, extralegal factors inherent to and indicative of mental disorder will predict arrest when legally relevant factors are controlled, with the criminality perspective's primary assertion, only factors considered legally relevant will predict arrest, when clinical factors are controlled. Next we compare the criminalization perspective's assertion that the factors that predict arrest among individuals with major mental disorders differ from the factors that predict arrest among non-disordered individuals with the criminality perspective's assertion that the factors that predict arrest among non-disordered individuals will similarly predict arrest among individuals with major mental disorders.

Previous research exploring the validity of the theoretical arguments asserted by each of the theoretical perspectives has typically examined one side of the debate in isolation from the other side. The use of competing hypotheses allows for an unbiased comparison. To test these hypotheses, we use a sample of patients discharged from psychiatric hospitals and a comparison sample drawn from the communities in which the discharged patients reside. These data are well-suited to facilitate a direct comparison of these competing perspectives (criminality and criminalization). We focus here on arrest, a critical decision as it is the gateway to criminal justice system. In the discussion that follows, we review the literature from a number of disciplines highlighting theoretical assertions and review research perspectives to identify the factors that have been found to significantly predict arrests of individuals with mental disorders.

Literature Review

The Criminalization Perspective

Researchers favoring the criminalization perspective argue that deinstitutionalization, strict hospitalization criteria, criminal justice system net-widening, and the wars on drugs and crime have resulted in a number of unintended consequences that have disproportionately affected individuals with mental disorders (Hiday & Burns, 2010;

Lamb et al., 2004; Lurigio, 2012). Each of these movements produced macro, system-level factors which increased the risk of arrest for individuals with mental disorders by impeding access to mental health care, increasing contact with police, and limiting police discretion during encounters with individuals with mental disorders.

Since deinstitutionalization, research has consistently demonstrated that strict emergency hospitalization criteria (Bittner, 1967; Borum, Williams Deane, Steadman, & Morrissey, 1998; Lamb et al., 2004; Teplin, 1984, 1985, 2000), fragmented and underfunded community mental health systems (Teplin, 1984, 1985, 2000), and arduous, time-impeding hospital admission processes (Bittner, 1967; Borum et al., 1998; Teplin, 1984, 1985, 2000) restrict the available options police officers have when responding to situations involving individuals with major mental disorders. Accordingly, Bittner (1967) and Teplin (1985) found police officers are hesitant to pursue emergency mental health treatment. According to Green (1997), once police officers have taken an individual with major mental disorders into custody, whether the individual will satisfy a hospital's strict criteria for admission becomes the factor most salient in their decision to seek emergency psychiatric hospitalization or make an arrest.

In many jurisdictions, discrepancies exist among the statutory conditions that require police to seek emergency mental health treatment, the legal criteria for involuntary commitment, and the availability of appropriate community mental health services. Although there is some legal variation among states, typically police officers must seek emergency mental health treatment when individuals have (a) a demonstrated risk of harm to self or others, (b) a critical disability, and/or (c) an obvious illness (Green, 1997; Teplin, 1984). Yet, only individuals that present an imminent risk of harm to themselves or to others are likely to meet hospital criteria for emergency hospitalization or commitment (Lamb et al., 2004; Markowitz, 2006; Teplin, 1984). To complicate matters, individuals with co-occurring substance abuse or dependence disorders, co-occurring personality disorders, or those with a history of violence and criminal behavior are often denied treatment, even when they meet the criteria for emergency treatment (Teplin, 1984; Hiday & Burns, 2010; Lamb et al., 2004). Therefore, arrest, by default, may be the only option available to police officers when individuals fail to meet the required dangerousness standard, have a co-occurring substance or personality disorder, or have a history of violence or criminal behavior (Hiday & Burns, 2010; Teplin, 1984, 1985), an observation that led Teplin (1984, p. 800) to conclude that the criminal justice system is the only system that "cannot say no." Criminal justice system net-widening is, therefore, the natural product of discrepancies within the mental health system that places the burden on police to operate as "street corner psychiatrists" (Teplin & Pruett, 1992, p. 139).

Primary support for the criminalization perspective is derived from research demonstrating the ability of clinical factors to significantly predict arrest. Clinical factors are observable and/or diagnosable factors of concern in the treatment of mental disorder. Because clinical factors occur exclusively in individuals with mental disorders, they are inextricably linked to mental disorder. Therefore, these factors are inherently defined as extralegal. Clinical factors that significantly predict arrest include diagnosis

(Becker, Ross, Boaz, & Constantine, 2011), nature and severity of symptoms (Elbogen, Mustillo, van Dorn, Swanson, & Swartz, 2007; Wolff, Diamond, & Helminiak, 1997), medication noncompliance (Brekke, Prindle, Bae, & Long, 2001; Elbogen et al., 2007; Lamb & Weinberger, 2011), poor insight (Elbogen et al., 2007; Lamb & Weinberger, 2011), impaired functioning (Brekke et al., 2001; Swartz & Lurigio, 2007), impaired intellectual functioning (Thomas, Thomas, Burgason, & Wichinsky, 2014), co-occurring substance abuse or dependence disorders (Brekke et al., 2001; Clark, Ricketts, & McHugo, 1999; Elbogen et al., 2007; Hiday & Burns, 2010; Hodgins, Alderton, & Mak, 2007; Junginger et al., 2006; Lamb & Weinberger, 2011; Pandiani, Rosencheck, & Banks, 2003; Swartz & Lurigio, 2007; Tengstrom, Hodgins, Grann, Langstrom, & Kullgren, 2004; White, Chafetz, Collins-Bride, & Nickens, 2006), co-occurring personality disorders (Hiday & Burns, 2010; Hodgins et al., 2007; Tengstrom et al., 2004), and a history of prior psychiatric hospitalization (Elbogen et al., 2007).

Criminalization proponents typically advocate for policy solutions that focus on fortifying the mental health system and developing targeted pre-adjudication criminal justice diversionary interventions. More specifically, criminalization proponents have recommended (a) increased funding of the mental health system (Teplin, 2000; Wolff, Fruah, Huening, Shi, & Epperson, 2013), (b) expanded community mental health (Lamb & Weinberger, 2011; Markowitz, 2011), (c) increased number of psychiatric beds available (Lamb & Weinberger, 2011; Markowitz, 2006), (d) repair fragmented mental health system (Grudzinskas, Clayfield, Roy-Bujnowski, Fisher, & Richardson, 2005; Teplin, 1984, 2000; Wolff et al., 2013), (e) collaboration between the mental health and criminal justice systems (DeMatteo, LaDuke, Locklair, & Heilbrun, 2013; Fisher et al., 2010; Fisher, Roy-Bujnowski et al., 2006; Grudzinskas et al., 2005; Lamb et al., 2002; Lamb et al., 2004; Lurigio & Watson, 2010; Teplin, 1990, 2000), (f) specialized police response such as crisis intervention teams (CIT; Lamb et al., 2002; Lamb et al., 2004; Tucker, VanHasselt, Vecchi, & Browning, 2011; Watson & Angell, 2013), (g) specialized police training in the recognition of mental disorder and de-escalation techniques (Clark et al., 1999; Lamb & Weinberger, 2011; Lipson, Turner, & Kasper, 2010; Lurigio & Watson, 2010; Martinez, 2010; Teplin, 1990, 2000; Watson, Corrigan, & Ottari, 2004), and (h) screening for mental disorder at jail intake with immediate diversion to community mental health (Peterson, Skeem, Hart, Vidal, & Keith, 2010; Teplin, 1990). Criminalization proponents have also been strong advocates for alternatives to traditional criminal justice processing such as mental health courts (DeMatteo et al., 2013).

The Criminality Perspective

Although the narrative offered by the criminalization perspective has been widely accepted by many scholars and practitioners, others have been less enthusiastic, even skeptical, of its most basic assertions. Those challenging the criminalization perspective acknowledge disparities in arrest rates between those with and those without major mental disorders. However, they reject system-level explanations which attribute arrest disparities to deinstitutionalization and declining availability of psychiatric

hospitals and community psychiatric services while ignoring changes within the criminal justice system itself. For example, Frank and Glied (2006) suggested, rather than evidence of criminalization, observed increases in the arrest rate of individuals with major mental disorders post-deinstitutionalization are indicative of the explosive growth of the criminal justice system stemming from "tough on crime" policies. That is, increases in arrest rates of individuals with major mental disorders are proportionate to the expansion of the criminal justice system itself and these increases post-deinstitutionalization have not been uniquely experienced by individuals with major mental disorders. Rather, greater numbers of individuals, with and without major mental disorders, have realized increases in arrest rates post-deinstitutionalization (Frank & Glied, 2006).

Criminality proponents argue the emphasis criminalization researchers have placed on clinical factors is misguided. In police encounters involving individuals with major mental disorders, Bittner (1967, p. 279) found that police officers will only take official action when the situation represents a "serious police matter"—one in which there is a significant threat to person or property or when police action is required to maintain or restore public order. This suggests that the most salient factors influencing officer arrest decisions are those that are legally relevant and occur at the encounter level. Furthermore, because of their legal relevance, these factors should similarly predict arrest among non-disordered individuals. Researchers favoring the criminality perspective contend the significance of a mental disorder diagnoses disappears when these legally relevant and encounter-level factors are controlled. More directly, when treated as a suspect characteristic, mental disorder fails to significantly predict arrest during police encounters, holding all else constant (Engel & Silver, 2001).

In one test of the criminality thesis, Engel and Silver (2001) find individuals with mental disorders are less likely to be arrested than non-disordered individuals once legally relevant and encounter-level factors are controlled. Furthermore, they find the factors most salient to police arrest decisions for individuals with major mental disorders similarly predict arrest for non-disordered individuals. Novak and Engel (2005) find that the disproportionate arrest rates of individuals with major mental disorders are a result of their intoxicated or disorderly demeanor during encounters with the police. In their study of police encounters, they find individuals with major mental disorders are more likely to threaten or use violence, be intoxicated, and behave disrespectfully and defiantly toward police (Novak & Engel, 2005). Similarly, Fisher and his colleagues (2011) find the strongest predictor of arrest for individuals with mental disorders was assault or battery on police officers during the police encounter.

A review of the literature reveals that a number of legally relevant and encounter-level factors have been shown to similarly predict arrest among individuals with and without mental disorders. These factors include the nature and severity of offense (Engel & Silver, 2001; Green, 1997; Novak & Engel, 2005), prior criminal history (Godfredson, Ogloff, Thomas, & Luebbers, 2010; Green, 1997; Hodgins et al., 2007), criminal thinking patterns (Peterson et al., 2010), suspect demeanor (Engel & Silver, 2001; Fisher et al., 2011; Novak & Engel, 2005), substance intoxication (Engel & Silver, 2001; Novak & Engel, 2005), public location of encounter (Engel & Silver,

2001; Novak & Engel, 2005), police-initiated encounter (Engel & Silver, 2001), offender known to victim (Engel & Silver, 2001), and victim requests for arrest (Engel & Silver, 2001; Novak & Engel, 2005).

It has also been argued that individuals with major mental disorders are disproportionately arrested because they disproportionately engage in violence and crime (Engel & Silver, 2001; Hiday & Burns, 2010; Hirschfield et al., 2006; Novak & Engel, 2005; Skeem et al., 2011). The criminalization hypothesis suggests that police, unfamiliar with mental disorder, often confuse disordered behavior for criminal behavior, and as a result criminality researchers erroneously conclude that individuals with major mental disorders commit more crime. However, criminality researchers contend the higher level of offending by individuals with major mental disorders is less attributable to symptomatology and better explained by risk factors for offending. When compared with non-disordered offenders, offenders with mental disorders possess a greater number of general risk factors for violence and criminal behavior (Skeem et al., 2011). Researchers favoring the criminality perspective have attributed this increased risk to a number of factors that similarly predispose non-disordered individuals to violence and crime including criminogenic environments (Fisher, Roy-Bujnowski et al., 2006; Silver, 2000), criminogenic needs (Peterson et al., 2010), sociodemographic variables (Fisher & Drake, 2007), psychosocial factors (Skeem et al., 2011), or personality characteristics (Hodgins et al., 2007; Tengstrom et al., 2004).

Previous research has identified a number of factors which increase the risk of arrest among individuals with major mental disorders that similarly predict arrest among non-disordered persons. Individuals with major mental disorders who are at the greatest risk of arrest are typically males (Becker et al., 2011; Clark et al., 1999; Wolff et al., 1997), young-adults (Brekke et al., 2001; Clark et al., 1999; Pandiani et al., 2003; Wolff et al., 1997), non-White (White et al., 2006), have low socioeconomic status (Elbogen et al., 2007; Fisher, Roy-Bjnowski et al., 2006; Wolff et al., 1997), have a history of violence (Monahan et al., 2001; Swartz & Lurigio, 2007) and/or victimization (Brekke et al., 2001; Hiday & Burns, 2010; White et al., 2006; Wolff et al., 1997), are homeless or transient (Becker et al., 2011; Brekke et al., 2001; Clark et al., 1999; White et al., 2006), and live in disorganized, urban areas (Clark et al., 1999; Hiday & Burns, 2010; Wolff et al., 1997).

Criminality proponents have advocated for policies that focus on preventative programming and back-end correctional diversionary interventions that address individuals with major mental disorders' risk heterogeneity, co-occurring socioeconomic, psychosocial, and substance abuse problems that contribute to their increased criminal offending (Becker et al., 2011; Fisher et al., 2010; Fisher, Silver, & Wolff, 2006; Lurigio, 2012; Peterson et al., 2010; Wolff et al., 2013; Wolff, Maschi, & Bjerklie, 2004). More specifically, criminality proponents have recommended (a) mental health treatment providers incorporate screening into their treatment programs to identify general risk factors for offending (Clark et al., 1999), (b) mental health providers ameliorate increased risk through treatment and/or referral to social services (Becker et al., 2011; Fisher et al., 2010; Fisher, Silver, & Wolff, 2006; Lurigio, 2012; Peterson et al., 2010; Wolff et al., 2013; Wolff et al., 2004), (c) back-end diversionary programs such

as mental health courts (DeMatteo et al., 2013), (d) correctional strategies such as outpatient commitment and intensive case management (DeMatteo et al., 2013; Lamb & Weinberger, 2011; Litschge & Vaughn, 2009; Markowitz, 2006; Peterson et al., 2010), and (e) reentry strategies that address general risk factors of offending (DeMatteo et al., 2013). Criminality proponents have similarly advocated for many of the same policy recommendations advanced by criminalization proponents, such as the expansion of community mental health, collaboration between the mental health and criminal justice systems, specialized police response, and specialized police training (Engel & Silver, 2001; Fisher, Silver, & Wolff, 2006; Peterson et al., 2010).

The Current Study

In sum, the criminalization perspective argues that deinstitutionalization, strict hospitalization criteria, criminal justice system net-widening, and the wars on drugs and crime have created a significant arrest disparity between individuals with major mental disorders and non-disordered individuals. According to the criminalization perspective, the factors most predictive of arrest for individuals with major mental disorders are extralegal factors indicative of and inherent to mental disorder. Furthermore, because these extralegal factors are inextricably linked to mental disorder, the factors that predict arrest for individuals with major mental disorders will differ from those that predict arrest in the general population.

The criminality perspective argues that, when compared with non-disordered individuals, individuals with major mental disorders are disproportionately arrested because they have a greater propensity for violence and criminal behavior, possess a greater number of general risk factors for arrest, and are more likely to behave disrespectfully and defiantly during encounters with police. According to the criminality perspective, when legally relevant and encounter-level factors are controlled, extralegal factors fail to predict arrest among individuals with major mental disorders. Moreover, the factors that predict arrest among individuals with major mental disorders are the same factors that predict arrest in the general population.

Based on these assertions, we propose the following competing hypotheses:

Hypothesis 1a: Net of controls, extralegal factors (i.e., symptomatology and impaired intellectual functioning) will predict arrest.
Hypothesis 1b: Net of controls, legally relevant factors (i.e., prior criminal history, violence, and drug or alcohol use) will predict arrest.
Hypothesis 2a: The factors that predict arrest among individuals with major mental disorders differ from the factors that predict arrest in non-disordered populations.
Hypothesis 2b: The factors that predict arrest in non-disordered populations will similarly predict arrest among individuals with major mental disorders.

If the criminalization hypothesis is correct, we expect extralegal factors to predict arrest when legally relevant factors are controlled. In addition, we expect the factors

that predict arrest among individuals with major mental disorders to differ from the factors that predict arrest among non-disordered individuals. If, however, the criminality thesis is correct, we expect only those factors considered legally relevant to predict arrest net of controls. Moreover, the factors that predict arrest among non-disordered individuals will similarly predict arrest among individuals with major mental disorders.

Method

To assess the competing hypotheses, we analyzed data from the MacArthur Violence Risk Assessment Study (MacRisk; for a full description of the study, see Monahan et al., 2001; Silver, Mulvey, & Monahan, 1999; Steadman et al., 1998). The MacRisk is a multi-wave study of violence perpetrated by individuals recently discharged from acute psychiatric hospitals at three sites (Pittsburgh, Pennsylvania; Kansas City Missouri; and Worcester, Massachusetts). Study participants were interviewed in the hospital and, on discharge, re-interviewed at each of five follow-ups spaced approximately 10 weeks apart. Additional data were collected from patient charts, collateral interviews, and official records.

To provide comparative context, the University of Pittsburgh's Center for Social and Urban Research drew a non-patient, community sample from the neighborhoods in which patients discharged from the Pittsburgh facility resided during the 1-year follow-up period. Participants in the community sample were administered the same assessment instruments administered to participants in the patient sample. Unlike participants in the patient sample, participants in the community sample were interviewed only once. Questions reference behavior and events occurring in the preceding 10 weeks. Additional data sources included collateral interviews and official records.

Patient Sample

Patients were selected for inclusion in the MacRisk using a stratified random sample of all eligible psychiatric admissions at each of the three facilities. The sample was stratified by race, gender, and age. Eligibility requirements included (a) civil admission, (b) 18 to 40 years of age, (c) English-speaking, (d) White or African American (Hispanic patients were also eligible at the Worcester facility), and (e) chart diagnosis of a psychotic disorder, major mood disorder, substance abuse or dependence disorder, or a personality disorder. Participants were continuously enrolled beginning in 1992 and ending in 1994. Follow-up interviews with later enrolled participants concluded in 1995. Of the 1,695 patients approached to participate in the study, 71% (n = 1,203) consented to participate and 67% (n = 1,136) completed baseline interviews (Appelbaum, Robbins, & Monahan, 2000). In regard to follow-up interviews, 83.7% (n = 951) completed at least one follow-up interview, 72% (n = 818) completed three or more follow-up interviews, and 60% (n = 563) completed all five follow-up interviews (Appelbaum et al., 2000).

Community Sample

The community sample is comprised of randomly selected individuals residing in the neighborhoods patients resided during the year following their discharge. A list of all census tracts corresponding to the locations in which patients resided during the follow-up period was created. Participants in the community sample were proportionately sampled from the patient-matched census tracts (for a detailed description of the sampling strategy used in community sample, see Steadman et al., 1998). To be eligible for inclusion, participants in the community sample must have resided at their address for at least 2 months, be between the ages 18 and 40, and identify as White or African American. All interviews with participants in the community sample were conducted between March and December, 1995. In total, 519 community interviews were completed (Silver, 2000).

Measures

Arrest. Arrest information was based on participants' self-reports. In the patient sample, participants were asked if they had been arrested since the date of last contact at each follow-up (approximately 10-week intervals for 1 year post-discharge). Responses were coded as 1 (*yes*) and 0 (*no*). Participants who reported at least one arrest during any follow-up were coded as 1. In the community sample, participants were asked if they had been arrested in the previous 2 years. Responses were coded as 1 (*yes*) and 0 (*no*).

Verbal IQ. Participants in the patient and community samples were administered the vocabulary subtest of the Wechsler's Adult Intelligence Scale–Revised (WAIS-R). The vocabulary subtest is a 35-item instrument and has been shown to strongly correlate with the full IQ score (DeLisi, Vaughn, Beaver, & Wright, 2010). The raw scores for each item were scaled to form a total raw score and is used in the following analyses to indicate Verbal IQ. The scale ranges from 1 to 70. In both samples, the sample mean was imputed for missing values. Prior to imputation, 19.1% (*n* = 217) of the patient sample and 28.3% (*n* = 174) of the community sample had a missing value for this measure.

Victimization. In both the patient and community samples, victimization was based on participants' self-reports to the following items: (a) "Has anyone thrown something at you?" (b) "Has anyone pushed, grabbed, or shoved you?" (c) "Has anyone slapped you?" (d) "Has anyone kicked, bitten, or chocked you?" (e) "Has anyone hit you with a fist or object or beaten you up?" (e) "Has anyone threatened you with a knife or gun or other lethal weapon?" and (f) "Has anyone used a knife or fired a gun at you?" Responses were collapsed into a dichotomous variable indicating the participant experienced a victimization and was coded as 1 (*yes*) and 0 (*no*). In the patient sample, participants who reported any victimization at any follow-up were coded as 1.

Principle diagnosis. In the patient sample, participants' principle diagnosis is included in the following patient sample analyses to control for the differential effects of disorder types. Participants were categorized into one of four broad disorder categories based on the principle diagnosis given during the baseline interview. Disorder categories include psychotic disorders, bipolar disorder, major depression disorders, and substance abuse and dependence disorders. Diagnoses were based on *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.; *DSM-III*; American Psychiatric Association [APA], 1980) criteria. Dummy variables were created for each disorder type and coded as 1 (*yes*: *principal diagnosis*) and 0 (*no: not principal diagnosis*).

Treatment. To control for the possibility that participants in the community sample have been diagnosed with a mental disorder, information regarding current mental health and/or substance abuse treatment is included in the following community sample analyses. Treatment is coded as 1 (currently receiving treatment) and 0 (not receiving treatment).

Threat/control override (TCO) delusions. In both the patient and community samples, delusions were assessed using the Diagnostic Interview Schedule (DIS) and the MacArthur-Maudsley Assessment of Delusions Schedule. Delusions were coded for content. Delusions that involved themes of persecution were coded as threat delusions. These included the belief that people were spying on the participant, the belief that people were following the participant, the belief that the participant was being secretly tested or experimented on, or the belief that someone was plotting against the participant or trying to harm them. Delusions that involved themes of body or mind control or thought broadcasting were coded as control-override delusions. These included the belief that strange thoughts or thoughts that were not the participant's were "being put directly into their mind," the belief that "someone or something could take or steal thoughts" from the participant's mind, the belief that "special messages were being sent to the subject through the television or radio," or the belief that "strange forces were working on (the subject), as if (he or she) was being hypnotized or magic was being performed on (him or her), or (he or she) was being hit by x-rays or laser beams." A dichotomous variable was created to indicate the presence of TCO delusions and was coded as 1 (*TCO delusions reported*) and 0 (*TCO delusions not reported*). In the patient sample, participants who reported experiencing a TCO delusion at any follow-up were coded as 1.

Hallucinations. Hallucination information is based on participants' self-reports. As part of a structured clinical interview, participants in both the patient and community samples were asked whether they had experienced any auditory hallucinations. Specifically, participants were asked, "In the last 10 weeks, have you more than once had the experience of hearing things or voices other people couldn't hear?" A dichotomous variable was created to indicate the presence of hallucinations was created and was coded as 1 (*hallucination reported*) and 0 (*hallucination not reported*). In the patient sample, participants who reported experiencing a hallucination at any follow-up were coded as 1.

Violence. In both the patient and community samples, violence was based on participants' self-reports to the following items: (a) "Have you thrown something at anyone?" (b) "Have you pushed, grabbed, or shoved anyone?" (c) "Have you slapped anyone?" (d) "Have you kicked, bitten, or chocked anyone?" (e) "Have you hit anyone with your fist or object or beaten anyone up?" (f) "Have you threatened anyone with a knife or gun or other lethal weapon?" (g) "Have you used a knife or fired a gun at anyone?" and (h) "Have you done anything else that might be considered violent? Responses were collapsed into a dichotomous variable indicating the participant committed violence and coded as 1 (*yes*) and 0 (*no*). In the patient sample, participants who reported any violent offending at any follow-up were coded as 1.

Antisocial personality disorder. Antisocial personality disorder was assessed using the Structured Interview for *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev.; *DSM-III-R*; APA, 1987) Personality (SIDP-R) in both the patient and community samples. The SIDP-R is a semi-structured interview used to assess the presence of Axis II disorders (First, Spitzer, Gibbon, & Williams, 1995). Antisocial personality disorder is coded as 1 (*present*) and 0 (*absent*). Antisocial personality disorder is included as a proxy measure for suspect demeanor/behavior.

Alcohol use. Information regarding alcohol use is based on participant's self-reports. In both the patient and community sample, participants were asked whether they have had any alcoholic drinks in the preceding 10 weeks. Responses were coded as 1 (*yes*) and 0 (*no*). In the patient sample, participants who reported consuming an alcoholic drink at any follow-up were coded as 1.

Drug use. Information regarding alcohol use is based on participant's self-reports. In both the patient and community sample, participants were asked "have you used any street drugs, even if it was just one time" in the preceding 10 weeks. Responses were coded as 1 (*yes*) and 0 (*no*). In the patient sample, participants who reported using drugs at any follow-up were coded as 1.

Age. In both the patient and community sample, age is indicated in years.

Sex. In both the patient and community samples, sex was coded as 1 (*male*) and 0 (*female*).

Race. A dichotomous race variable was created in both the patient and community samples and coded as 1 (*non-White*) and 0 (*White*).

Data Analysis and Results

Table 1. Comparison of Patient and Community Sample Characteristics.

	Patient sample (*n* = 951)	Community sample (*n* = 503)
% Arrested	29.3	7.4
% Victimized	61.0	18.3
% TCO delusions	28.9	21.7
% Hallucinations	26.2	3.8
% Violence	55.0	18.9
% Antisocial	87.5	43.1
% Prior arrest	38.2	16.5
% Used alcohol	80.3	74.4
% Used drugs	49.2	23.9
% Male	57.6	38.2
% Non-White	31.2	40.4

Note. TCO = threat/control override.

Table 2. Comparison of Patient and Community Sample Bivariate Associations With Arrest.

	Patient sample		Community sample	
	r	*p*	*r*	*p*
Verbal IQ	−.178	.001***	−.128	.004**
Victimization	.245	.001***	.064	.154
TCO delusions	−.014	.674	.111	.013*
Hallucinations	.037	.261	−.016	.722
Violence	.235	.001***	−.058	.193
Antisocial	.020	.530	.247	.001***
Prior arrests	.197	.001***	.182	.001***
Alcohol use	.127	.001***	.061	.173
Drug use	.290	.001***	.307	.000***
Age	−.036	.261	.011	.803
Sex	−.160	.001***	.186	.001***
Race	.169	.001***	.187	.001***

Note. TCO = threat/control override.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$ (two-tailed).

Table 3. Comparison of Patient and Community Logistic Regression Models Predicting Arrest.

	Patient model				Community model			
	b	*SE*	OR	e^bStdX	*b*	*SE*	OR	e^bStdX
Verbal IQ	−0.019	0.006	0.981***	0.755	−0.025	0.017	0.975	0.749
Victimization	0.784	0.205	2.191***	1.466	0.827	0.547	2.287	1.377
TCO delusion	−0.376	0.194	0.686	0.843	0.068	0.455	1.070	1.028
Hallucination	0.053	0.192	1.054	0.977	−1.376	1.115	0.253	0.769
Violence	0.529	0.197	1.698**	1.301	−2.113	0.723	0.121**	0.437
Antisocial	−0.068	0.248	0.934	1.029	1.995	0.563	7.349***	2.690
Prior history	0.519	0.167	1.680**	1.287	−0.002	0.473	0.998	0.999
Alcohol se	0.018	0.243	1.018	1.008	0.226	0.558	1.254	1.104
Drug use	0.899	0.177	2.456***	1.556	1.659	0.444	5.252***	2.031
Age	−0.005	0.013	0.995	0.969	−0.021	0.036	0.979	0.880
Male	0.688	0.171	1.990***	1.404	0.758	0.442	2.134	1.451
Race	0.360	0.181	1.434	1.181	1.091	0.476	2.977*	1.712
Constant	−2.466	0.581	0.085	—	−3.845	1.450	0.021	—

Note. In a separate model (not shown), type of disorder was included in the patient model. Only substance dependence disorders significantly predicted arrest. Psychotic disorders, bipolar and related disorders, and major depressive disorders did not significantly predict arrest above and beyond characteristic symptoms of the disorders (i.e., TCO delusions, hallucinations, substance use) already included in the models shown. TCO = threat/control override.
$*p \leq .05.$ $**p \leq .01.$ $***p \leq .001.$