



Is there any significant relationship between mental illness and crime?

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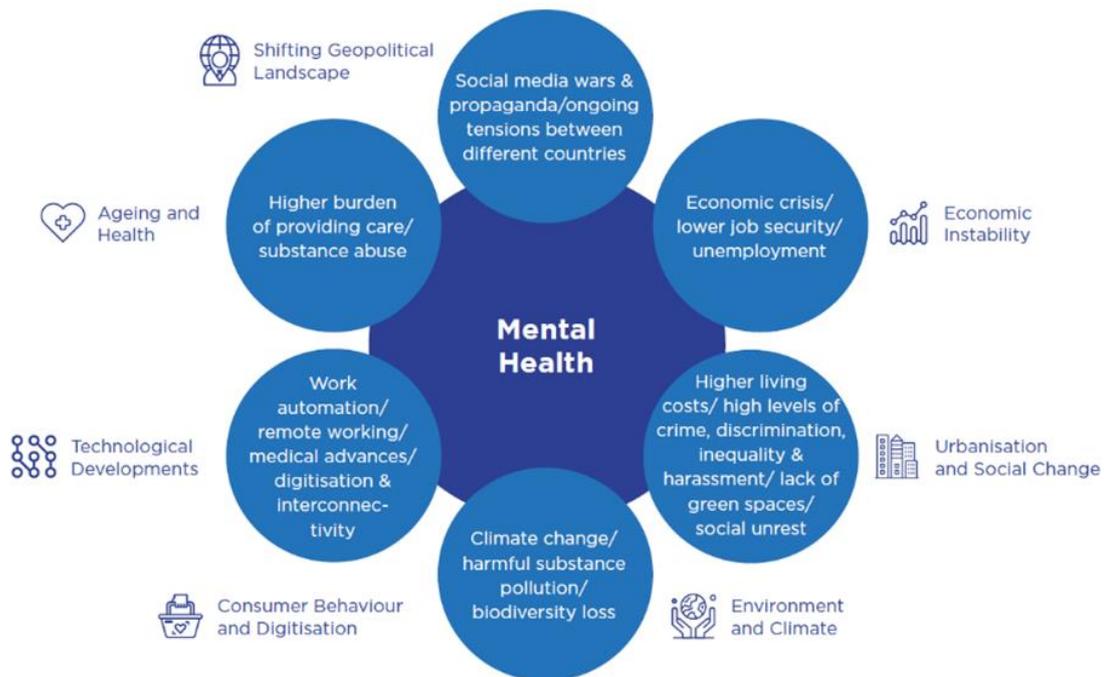
Abstract

Research investigating the link between mental health, crime and violence often rely on populations that are at a high-risk of violent and criminal behavior, such as prison inmates and psychiatric patients. As a result of this selection bias, the relationship between mental health, criminal and violent behavior is significantly overestimated, with mental health being incorrectly linked with violent and criminal behaviors. The results revealed that there is no statistically significant difference in terms of violence and crime involvement between individuals with a mental health diagnosis and those without. Moreover, the study did not find any statistically significant associations between specific mental health disorders and specific crime offenses. The findings suggest that certain mental health disorders do not strongly contribute to crime violence and involvement. Mental health disorder are accountable for a fraction of violent offenders (1%) and are responsible for only a small percentage of societal violence and criminal behavior (5%) (Fazel & Grann, 2006; Taylor, 2008; Varshney, Mahpatra, Krishnan, Gupta & Deb, 2015; Vinkers, de Beurs, Barendregt, Rinne, & Hoek, 2012; Walsh, Buchanan, & Fahy, 2002; Rueve & Welton, 2008). These findings suggest that there is not a clear established link between mental health and violent criminal behavior, except for psychopathy (Hare, 1996; Hart, 1998). Despite this, persistent stereotypes continue to exist which often associate mental health disorders with criminal and violent behavior; an image that is frequently reinforced through mass media outlets (Angermeyer, Dietrich, Pott & Matschinger, 2005).

I. Introduction

Mental health is the foundation for emotions, thinking, communication, learning, resilience, hope and self-esteem. Mental health is also key to relationships, personal and emotional well-being contributing and to community or society. Mental health is a component of overall well-being. It can influence and be influenced by physical health. Many people who have a mental illness do not want to talk about it. But mental illness is nothing to be ashamed of! It is a medical condition, just like heart disease or diabetes. And mental health conditions are treatable. Researchers are continually expanding the understanding of how the human brain works, and treatments are available to help people successfully manage mental health conditions.

A mental disorder, also referred to as a mental illness or psychiatric disorder, is a behavioral or mental pattern that causes significant distress or impairment of personal functioning. A mental disorder is also characterized by a clinically significant disturbance in an individual's cognition, emotional regulation, or behavior. It is usually associated with distress or impairment in important areas of functioning. There are many different types of mental disorders. Mental disorders may also be referred to as mental health conditions. Such features may be persistent, relapsing and remitting, or occur as single episodes. Many disorders have been described, with signs and symptoms that vary widely between specific disorders. Such disorders may be diagnosed by a mental health professional, usually a clinical psychologist or psychiatrist.



Causes of mental illness that can lead one to criminal behavior.

Not a single factor has been shown to cause mental illness in isolation. It has been found that mental illness is caused by a combination of several factors that interact with each other in a complex way for mental illness to occur. These factors can be categorized as biological factors, psychological factors, social factors and familial factors. This discussion will focus on how these factors make a person at an increased risk of criminal behavior.

1. Biological factors: Our behavior and human life are controlled by our genes. Therefore, using this explanation, it can be shown that some people 'are born with mental health problems and criminals'. It just needs a bit of trigger for this kind of behavior to manifest. This theory was initially advanced by an Italian psychiatrist in the 19th century who was working with prisoners. He was known as Cesare Lombroso. According to him, criminals had maldeveloped/insufficiently developed brains (Lombroso, 2006). He did his study among prisoners and found that they shared some physical characteristics such as a sloping forehead and receding chins. This made him conclude that criminals were born that way hence being involved in crime was as a result of a person's biology and

biological characteristics. Hence the theory was known as the theory of positivism (Lombroso, 2006). This theory has however been overshadowed by extensive research by various psychologists. The biological causes of mental illness and crime have been attributed to a person's genetic makeup, changes in the neurophysiological conditions of the brain and biochemical imbalances such as hormonal imbalances.

- (a) Genetic influence and crime: various studies have shown that our genetic makeup can predispose us to mental illness or crime. It is believed that criminals inherit certain genes from their parents that predispose them to crime. This has been demonstrated by twin studies whereby a twin is more likely to be involved in criminality when the other twin is a criminal or has been prisoned as compared to the general population, adoption studies which explain that an adopted child whose parents were criminals is more likely to be involved in a criminal behavior even without having close relationship with the parents.



This led to the conclusion that criminality is linked to a person's genetic makeup.

- (b) **Biochemical imbalance.** Hormonal imbalance has been associated with increased risk of aggressiveness hence criminal behavior. For example, criminal activity in males has been associated with abnormally high levels of the hormone testosterone which normally control secondary sexual characteristics and has been linked to aggression. Various studies among prisoners has shown that those involved in violent crimes have very high levels of testosterone (McDermott, 2007). This also explains why the violent crimes are higher among men of the age of 28 since at this time, the level of testosterone is twice that of the men between the age of 31-66 years (McDermott, 2007).
 - (c) **Neuro physiological imbalance:** abnormality in the neurotransmitters in the brain has been attributed to various criminal activities. It has been shown that excessive elevation of epinephrine, serotonin and norepinephrine has been associated with certain psychotic symptoms such as hallucinations, delusions and illusions. These make people misinterpret sensory stimuli and make them more likely to commit crime. For example, a person having auditory hallucinations that someone is trying to kill him/her might get the impulsivity to kill that person before he's dead hence a criminality.
2. **Psychological factors:** Various psychologists have tried exploring the effect of a person's psychology and their predisposition to crime. They propose that crime comes as a result of unresolved conflicts in the mind. These unresolved conflicts make a person be under a given pressure that can lead them to commit crime. The role of intelligence has also been explored. It has been found that those with a low IQ are more likely to commit crime. Goddard who was the first proponent of this theory suggested that low intelligence made criminals lack the ability to learn the socially acceptable norms and conduct and resist offending behavior (Goddard, 1914). Another study conducted by Zeleny (1933) gave a postulation that criminals are more likely to have low scores on IQ tests as compared to non-criminals. These studies suggest that the likelihood of being a criminal is related to inability to follow rules. In addition to intelligence, certain personality traits have been associated with increased risk of being a criminal. Impulsivity has been implicated as one of the factors. Being impulsive implies that one is more likely to act immediately according to his/her instincts without thinking of the consequences. Poor self-control has been implicated to result in criminal behavior.
 3. **Familial factors:** Various familial factors such as poverty, polygamous family, family history of criminal behavior and poor upbringing have been associated with increased risk of criminal behavior. It has been shown that in families where one of the parents is an alcoholic, the children are twice at risk of engaging in crime. This has been explained by the fact that the parents have no time with their children to teach their children the socially acceptable norms. Those born outside wedlock or in families with marital feuds are more likely to engage in criminality as compared to those born in stable and supportive families.
 4. **Social factors:** Sociologists suggest that criminal activity is caused by factors that are external to the individual. These factors include social class, peer influence, drug and substance abuse, and their experience in the neighborhood. Sociologists Shaw and Henry D. McKay (1942) tried to do mapping of places where juvenile detainees live. These areas were characterized by poor housing, low socioeconomic status and poor health conditions with ever changing population dynamics. This led them to a conclusion that crime is influenced by the dynamics of the population and not individual's



dynamics especially in areas invaded by immigrants. Jock Young in his book *The Exclusive Society* (1999) argues that increased disparity between the poor and the rich has led to isolation of disadvantaged groups. This makes the poor feel frustrated and resolve to violence in order to get whatever they want, especially money and food.

Issues of concern

An essential element that plays into the false equivocation of psychiatric illness and criminality is the incorrect labeling of all criminals as persons with mental illness. Society at large views behavior and conduct problems as a symptom of a psychological disorder, which has led to the false public perception that equates criminality with psychiatric illness. The high levels of reported mental illness in jail and prison populations are primarily due to false labeling of criminals as having a psychiatric illness. These figures are not always based on thorough medical and psychiatric evaluation and diagnosis, but rather as a result of social factors.

Antisocial personality disorder (ASPD) is one such diagnosis that is widely and arbitrarily applied to many in the prison populations. As a result, there is a debate as to whether ASPD is even a psychiatric illness or just a societal moral judgment. The label is increasingly used to paint criminals as victims of psychiatric illness. Thus, it is imperative for clinicians to ensure that diagnoses are applied only when characteristic traits are extant, to not let criminals use the cover of psychiatric diagnoses to evade criminal punishment.

People with mental illness are arrested and sent to prison in disproportionate numbers, often due to a lack of awareness and resources in handling these individuals. The police often arrest these individuals for petty crimes such as jaywalking or wandering behavior as a preventive law and order measure. According to one study, 12 percent of adult psychiatric patients receiving treatment in the San Diego County health system had prior incarcerations, while 28 percent of Connecticut residents treated for schizophrenia and bipolar disorder had been arrested or detained.

The closure of state psychiatric hospitals which began with the deinstitutionalization drive in 1960 forced many psychiatric patients on the streets, forced to fend for themselves. As a result, these patients came into contact with the police and

the courts more often. The situation is exacerbated by a lack of training and staffing in the court system, potentially accounting for persons with mental illness comprising an ever-larger fraction of the jail and prison population. Many of the symptoms of psychiatric illnesses are behaviors considered antisocial or criminal such as wandering behavior. The result has been the false perception of a causal relationship between psychiatric illness and criminality.

Clinical Significance

Certain psychiatric conditions do increase a person's risk of committing a crime. Research suggests that patients with mental illness may be more prone to violence if they do not receive adequate treatment, are actively experiencing delusions, or have long-standing paranoia. Such patients are often under the influence of their psychiatric illness such as command hallucinations. Other comorbidities include conditions such as substance use disorder, unemployment, homelessness, and secondary effects of mental illness such as cognitive impairment, compound the risk of committing a violent crime. The most important and independent risk factor for criminality and violence among individuals with mental illness is a long-term substance use disorder. In patients with a major psychiatric illness, comorbid substance use disorder, there is a four-fold increase in the risk of committing a crime or violence. Studies have shown that the rise in violent crime committed by individuals with mental illness, may entirely be accounted for with a history of alcohol and/or drug use. Individuals with a severe mental illness that fall through the cracks or for one reason or another are non-adherent to treatment are particularly at higher risk of committing grave acts of violence. Untreated profound mental illness is particularly significant in cases of homicide—the zenith of the criminal spectrum, and such illness is even more significant for mass murders of strangers. Still, these cases are a smaller proportion to senseless acts of violence committed by criminals who act out of sheer criminal intent. Many individuals with mental illness face an uphill battle when trying to access mental health treatment. Many individuals do not receive the appropriate and timely treatment needed. Budget overruns and cuts in funding for public health and mental health in many cities further put people with mental illness in situations where they are involved in criminal activity. Further complicating the picture is the lack of mental health treatment facilities. Despite greater



awareness and effort to increase access to mental health treatment facilities, mental hospital beds per capita in the U.S. are lower than they have been since the 1850s.

Other issues

A far-sighted national mental health policy with expanded availability and access to treatment, while costly in the short run, could be a cost-effective and sensible approach. By some estimates, a ninety-day treatment in a mental hospital might prevent the 10-year imprisonment of an individual with mental illness. Expanded availability and access to mental health treatment would provide significant savings to society and crime victims. More importantly, it would improve a person with mental illness' quality of life and transform these individuals into productive members of society.

The link between psychiatric illness and criminality is complex and has profound societal implications. There is a great need for in-depth research and imaginative solutions for access and availability to mental health treatment. Currently, there is scant evidence to suggest that mental illness can independently predict criminal behavior. On the contrary, there is ample evidence that shows that persons with mental illness are far more likely to be the victim of violent crime rather than the perpetrator.

Jock Young in his book *The Exclusive Society* (1999) argues that increased disparity between the poor and the rich has led to isolation of disadvantaged groups. This makes the poor feel frustrated and resolve to violence in order to get whatever they want, especially money and food.

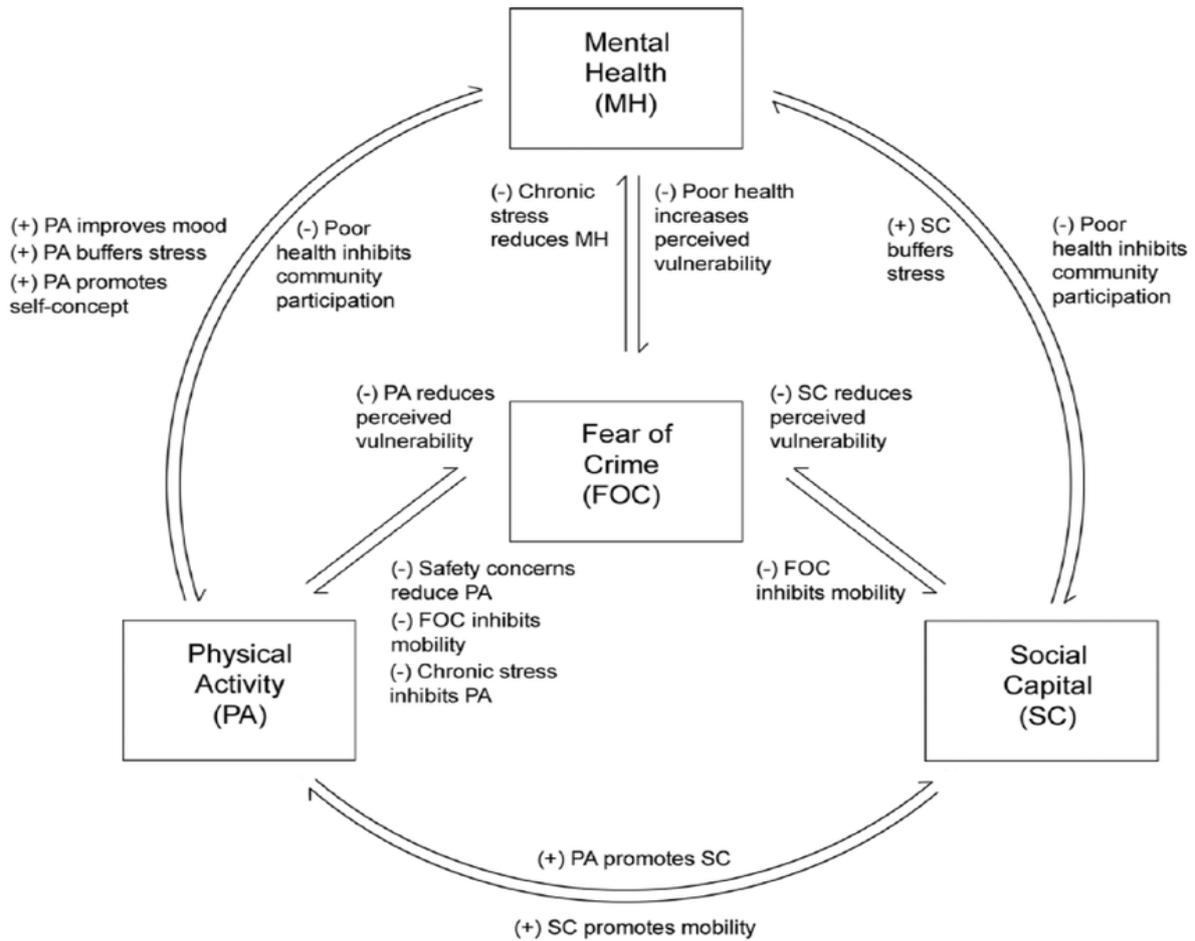
Relationship between mental illness and crime

Amongst all cases recorded by the department of justice, violence and especially gun violence forms the largest proportion of crime (Sherman, 2001). It is not clear why some people behave violently towards other people and why the incidences of violence and crime are high amongst other communities as compared to others. This is a complex topic that psychiatrists and psychologists have tried to understand. But from various studies, it is quite evident that this type of behavior cannot be explained as being caused by a single factor. It involves the interaction between the environment, social factors, biological factors and cultural factors.

When we look at various studies done by different scholars, media reports and clinical practice, violent crimes have been clearly attributed to two major factors, i.e. mental illness and personality disorders (Short et al, 2012). People with these conditions are at increased risk of getting involved in crime as compared to the general population. Therefore, questions arise; are these people to be considered as a threat to public safety? Is there a scientifically proven link between crime with personality disorders or mental illness?

Link between fear of crime and mental health

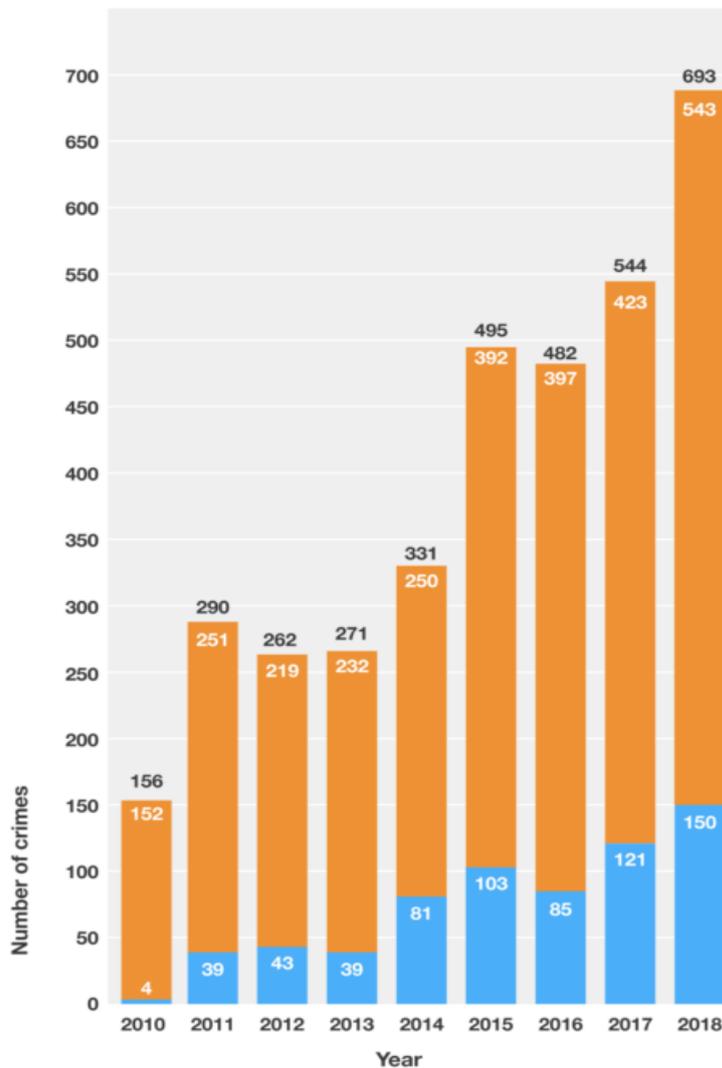
Dr. Robert "Bob" Morgan, the dean of the College of Health and Human Services at SIU, has researched treatment at the interface of mental health and criminal risk in justice-related issues as well as maintained a private practice for more than 20 years in forensic psychology before coming to SIU, and he says this is a major but common misconception in our society. Among the people who experience mental health issues and illness, only a small percentage will ever commit a crime, and among individuals who do commit crime, only three to five percent are due to serious mental health issues according to the Illinois Criminal Justice Information Authority. "Now, certainly we know that persons with mental illness are over represented in criminal justice systems, jails, prisons, probation, parole, but it's not because mental health is a predictor or cause of crime," Morgan said. Dr. Tamara Kang, a professor at SIU who researched mental health in the justice system and the criminogenic needs or factors that are predictive of reoffending of individuals who commit crime, say that the things that influence people who commit crime are the same things that influence people who are not involved in crime. "One is family, another is peers, school and employment, your available leisure activities," Kang said. "The one that doesn't apply to everybody broadly, but it is a robust empirical predictor of recidivism is substance abuse, and then you have different things like personality characteristics or antisocial cognitions, and so sometimes this is things like criminal thinking, where you feel that you would fix or solve problems by committing crimes." A main focus of treating individuals in the justice system is to help change the people justice-involved individuals spend time with. The more a person spends time with other people that are engaged in criminal activity, the more likely they will commit a crime.





Crimes involving victims or suspects experiencing mentally illness

City of Los Angeles, 2010 - 2018



xtown.la
Source: LAPD crime dataset
Designed by Danielle Boyce

Crime and Bipolar disorder

Among patients with bipolar disorder, the frequency of violent criminal acts is higher than in the general population (odds ratio [OR]=2.8, 95% confidence interval [CI]=1.8–4.3). The frequency is

higher among patients with bipolar disorder and a comorbid substance use disorder than among those without either disorder (OR=10.1, CI=5.3–19.2). As a result, the prevalence of bipolar disorder among prisoners is high (2%–7%). In prison,



patients' bipolar disorder symptoms can complicate their relationship with prison administrators, leading to an increased risk of multiple incarcerations. Moreover, the risk of suicide increases for these prisoners.

Criminal acts are common among patients with bipolar disorder and are often associated with problems such as addiction. Thus it is important to improve the diagnosis and treatment of inmates with bipolar disorder.

Bipolar disorder is a severe psychiatric disease characterized by recurrent alternating episodes of mania or hypomania and depression separated by euthymic periods that are variably affected by residual symptoms and dysfunction. Bipolar disorder is a complex disease with heterogeneous clinical presentations. The lifetime prevalence of bipolar disorder is approximately 1% for the bipolar disorder I subtype and may reach 6.5% when all bipolar disorder spectrum subtypes are considered. Thus bipolar disorder is a major public health problem and has been recognized as the seventh most common cause of disability-adjusted life years by the World Health Organization. Patients with bipolar disorder are similar to other patients with mental disorders in that they are more likely to be victims of violence than to be perpetrators. Among patients with bipolar disorder, criminal acts, imprisonments, and repeat offenses are considered to be poor outcomes.

Transgressions and criminal acts are typically associated with the manic phases of bipolar disorder, which are marked by irritability, exalted mood, and increased energy. These phases are often associated with megalomaniac ideas and feelings of omnipotence that could lead to public order offenses or confrontations with the police. For example, in a study of 66 imprisoned patients with bipolar disorder, Quanbeck and colleagues showed that approximately 75% had manic symptoms at the time of the offense. Manic symptoms of bipolar disorder may also present a risk of judicial complication because patients' behavioral and sexual disinhibition may lead to hypersexuality, excessive familiarity, or exhibitionism. Criminal acts may also occur during the depressive phases of bipolar disorder. The most serious offenses are associated with altruistic homicide, in which a patient (typically with a severe depressive disorder with psychotic symptoms) kills a family member to save him or her from a tragic fate (for example, disaster or apocalypse). This critical review of the international literature examined the complex

relationship between patients with bipolar disorder and the justice system.

SCHIZOPHRENIA AND CRIME

In patients with schizophrenia, (13.2%) had at least 1 violent offense compared with (5.3%) of general population controls (adjusted odds ratio [OR], 2.0; 95% confidence interval [CI], 1.1-3.7). The risk was mostly confined to patients with substance abuse comorbidity (of whom 27.6% committed an offense), yielding an increased risk of violent crime among such patients, whereas the risk increase was small in schizophrenia patients without substance abuse comorbidity (8.5% of whom had at least 1 violent offense; adjusted for interaction). The risk increase among those with substance abuse comorbidity was significantly less pronounced when unaffected siblings were used as controls (28.3% of those with schizophrenia had a violent offense compared with 17.9% of their unaffected siblings; adjusted for interaction, suggesting significant familial genetic or early environmental confounding of the association between schizophrenia and violence).

Schizophrenia was associated with an increased risk of violent crime in this longitudinal study. This association was attenuated by adjustment for substance abuse, suggesting a mediating effect. The role of risk assessment, management, and treatment in individuals with comorbidity needs further examination. More than 20 epidemiological studies have reported on the association between major mental disorder and violence, including more than 10 that specifically have examined the relationship with schizophrenia.¹ These reports typically find that schizophrenia is related to a 4- to 6-fold increased risk of violent behavior, which has led to the view that schizophrenia and other major mental disorders are preventable causes of violence and violent crime. Indeed, expert opinion has deemed that the evidence is sufficiently robust that new research should move beyond epidemiology and focus on treatment. However, uncertainties remain regarding the reported link. First, there are wide variations in risk estimates. These range from 7-fold increases in violent offenses in schizophrenia compared with general population controls to no association in 1 prospective investigation. Second, there is considerable uncertainty whether schizophrenia without substance abuse comorbidity is actually associated with violence. Large prospective and case-control studies have found no or only a weak association, while other investigations from Finland, Denmark, and the



United States report 3- to 4-fold risk increases. Third, the possible contribution of genetic and early environmental factors in mediating the link between schizophrenia and violence has not been reliably studied.

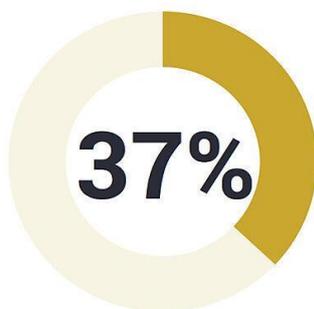
Conceptual models of violence in schizophrenia postulate that patients with schizophrenia are violent as a consequence of the psychopathological symptoms of the disorder itself (eg, delusions, hallucinations or secondary to comorbid substance use (an established risk factor for violence)). An alternative model is that schizophrenia and violent behavior co-occur because of familial factors (genetic or early environmental) that are related to both (eg, personality traits such as irritability, poor anger management, or inadequate coping with stress).

If, as we hypothesize, the association of schizophrenia and violence disappears when substance abuse is accounted for and appropriate adjustments are made for confounding, this would suggest that assessment and treatment for substance abuse comorbidity should be prioritized in individuals deemed at risk. It would also explain why attempts to find psychotic symptoms associated with violence have produced contradictory results. Therefore, by using longitudinal designs, we examined the relationship of schizophrenia with violent crime in Sweden from 1973 until 2006.

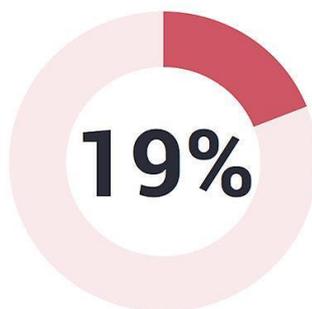
Anxiety and Crime

Children who suffer from social anxiety disorders are much more likely to engage in alcohol abuse and drug use at a very young age compared to their peers. This often leads to frequent contacts with law enforcement and oftentimes leads to a path towards the juvenile justice system. Fear of crime may also result in mistrust of others, in turn limiting the ability to form social ties. Social ties and social activities appear to be protective for physical and mental health and functioning. Fear of crime may also lead to restrictions in outdoor activities, including walking and cycling, and to increased car use. Those who fear crime may therefore be less physically active, a lifestyle that increases the risk of cardiovascular disease, poor mental health, and poorer physical and cognitive functioning. Fear of crime may have direct effects on psychological well-being. Finally, fear of crime may be a stressor that has direct physiological and behavioral consequences for health. It has been proposed that perceived or actual threat increases the vulnerability to pathogens; stimulates repeated physiological responses, producing wear and tear on the nervous and immune systems and increases the likelihood of heavy drinking. However, few studies have examined the evidence for the pathways linking fear of crime to health status.

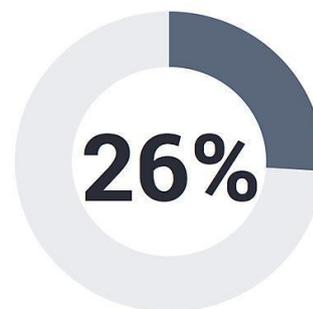
Anxiety about Crime



Knows a victim of a violent crime

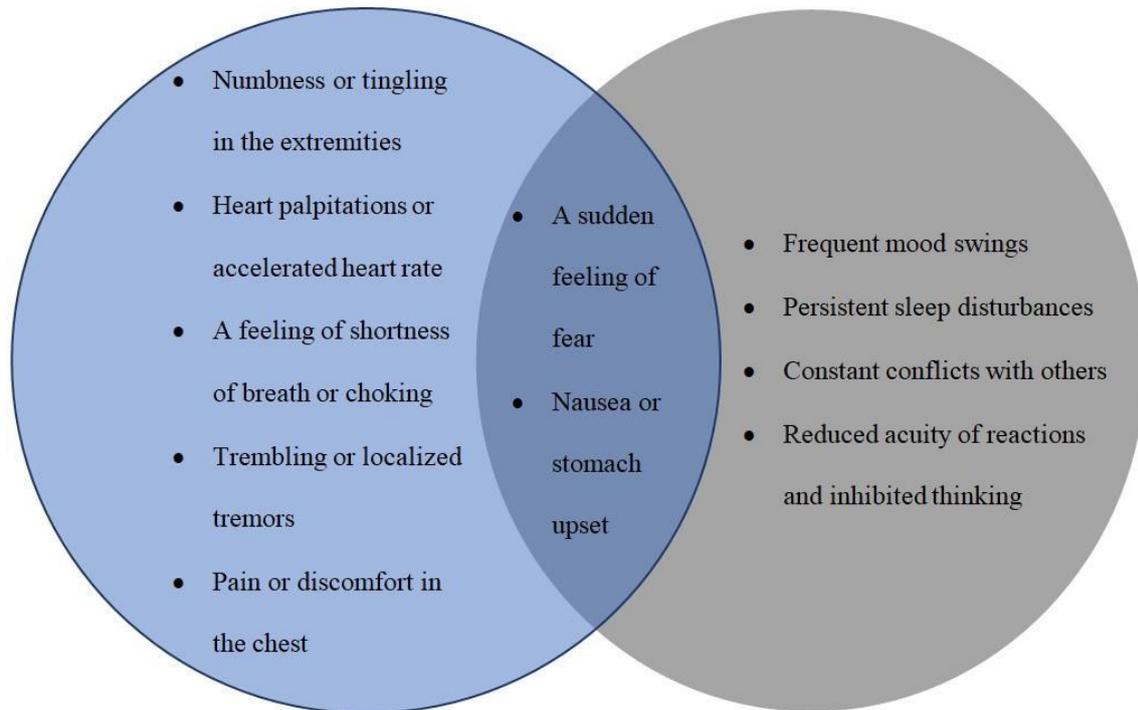


Knows someone who was murdered



Extremely/Very Concerned About Being Crime Victim

CATO INSTITUTE/YOUGOV 2016 CRIMINAL JUSTICE SURVEY



II. Conclusion

The relationship between psychiatric illness and criminality has been the topic of intense debate and scrutiny in the recent past in light of multiple mass shootings in the United States. While the renewed focus and media attention on the importance of mental health in the aftermath of such tragedies is a positive development, the relationship between mental illness and criminality is too often conflated.

The popular belief is that people with mental illness are more prone to commit acts of violence and aggression. The public perception of psychiatric patients as dangerous individuals is often rooted in the portrayal of criminals in the media as “crazy” individuals. A large body of data suggests otherwise. People with mental illness are more likely to be a victim of violent crime than the perpetrator. This bias extends all the way to the criminal justice system, where persons with mental illness get treated as criminals, arrested, charged, and jailed for a longer time in jail compared to the general population.

From the statistical evidence presented by different research reports, it is clear that the weight of the evidence is sufficient to reach a conclusion that there is a correlation between mental disorder and crime. Schizophrenia, for instance, is one of

the most common mental disorders and is known as a debilitating illness which subsequently affects the mood, perception and may cause delusion in the individuals. Doctors have presented their findings regarding the mental activities of mental disorder patients which show that they are more likely to be irrational besides having a different perception of typical issues. For instance, a schizophrenic person may choose to kill or harm a nurse if he / she is displeased with the service given. However there is also the issue of stereotyping and misconception in the society where mentally disordered people are considered violent. This is a biased concept as some individuals with mental disorders relate well with the rest of the community and have no cases of violent acts. It can be concluded though mentally disordered people are likely to commit crimes, the aspect of violence is catalyzed by other factors such as past violence, substance abuse or socioeconomic issues such as poverty.

References

- [1]. Watson A, Hanrahan P, Luchins D, Lurigio A. Mental health courts and the complex issue of mentally ill offenders. *Psychiatr Serv.* 2001 Apr;52(4):477-81. [PubMed]
- [2]. Gottfried ED, Christopher SC. Mental Disorders Among Criminal Offenders: A



- Review of the Literature. *J Correct Health Care*. 2017 Jul;23(3):336-346. [[PubMed](#)]
- [3]. Lamberti JS, Weisman RL, Schwarzkopf SB, Price N, Ashton RM, Trompeter J. The mentally ill in jails and prisons: towards an integrated model of prevention. *Psychiatr Q*. 2001 Spring;72(1):63-77. [[PubMed](#)]
- [4]. Habersaat S, Ramain J, Mantzouranis G, Palix J, Boonmann C, Fegert JM, Schmeck K, Perler C, Schmid M, Urban S. Substance-use disorders, personality traits, and sex differences in institutionalized adolescents. *Am J Drug Alcohol Abuse*. 2018;44(6):686-694. [[PubMed](#)]
- [5]. Steinert T, Lepping P, Bernhardsgrütter R, Conca A, Hatling T, Janssen W, Keski-Valkama A, Mayoral F, Whittington R. Incidence of seclusion and restraint in psychiatric hospitals: a literature review and survey of international trends. *Soc Psychiatry Psychiatr Epidemiol*. 2010 Sep;45(9):889-97. [[PubMed](#)]
- [6]. Dwyer E. The Final Years of Central State Hospital. *J Hist Med Allied Sci*. 2019 Jan 01;74(1):107-126. [[PubMed](#)]
- [7]. Fisher CE, Lieberman JA. Getting the facts straight about gun violence and mental illness: putting compassion before fear. *Ann Intern Med*. 2013 Sep 17;159(6):423-4. [[PubMed](#)]
- [8]. Volavka J, Citrome L. Pathways to aggression in schizophrenia affect results of treatment. *Schizophr Bull*. 2011 Sep;37(5):921-9. [[PMC free article](#)] [[PubMed](#)]
- [9]. Walsh E, Buchanan A, Fahy T. Violence and schizophrenia: examining the evidence. *Br J Psychiatry*. 2002 Jun;180:490-5. [[PubMed](#)]
- [10]. Köşger F, Eşsizoğlu A, Sönmez İ, Güleç G, Genek M, Akarsu Ö. [The Relationship between Violence and Clinical Features, Insight and Cognitive Functions in Patients with Schizophrenia]. *Turk Psikiyatri Derg*. 2016 Summer;27(2):0. [[PubMed](#)]
- [11]. Kelly TM, Daley DC, Douaihy AB. Treatment of substance abusing patients with comorbid psychiatric disorders. *Addict Behav*. 2012 Jan;37(1):11-24. [[PMC free article](#)] [[PubMed](#)]