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Mental illness and violence

Multiple interacting factors contribute to violent behavior.

Public opinion surveys suggest that many people think mental illness and violence go hand in hand. A 2006 national survey found, for example, that 60% of Americans thought that people with schizophrenia were likely to act violently toward someone else, while 32% thought that people with major depression were likely to do so.

In fact, research suggests that this public perception does not reflect reality. Most individuals with psychiatric disorders are not violent. Although a subset of people with psychiatric disorders commit assaults and violent crimes, findings have been inconsistent about how much mental illness contributes to this behavior and how much substance abuse and other factors do.

An ongoing problem in the scientific literature is that studies have used different methods to assess rates of violence — both in people with mental illness and in control groups used for comparison. Some studies rely on "self-reporting," or participants' own recollection of whether they have acted violently toward others. Such studies may underestimate rates of violence for several reasons. Participants may forget what they did in the past, or may be embarrassed about or unwilling to admit to violent behavior. Other studies have compared data from the criminal justice system, such as arrest rates among people with mental illness and those without. But these studies, by definition involving a subset of people, may also misstate rates of violence in the community. Finally, some studies have not controlled for the multiple variables beyond substance abuse that contribute to violent behavior (whether an individual is mentally ill or not), such as poverty, family history, personal adversity or stress, and so on.

The MacArthur Violence Risk Assessment Study was one of the first to address the design flaws of earlier research by using three sources of information to assess rates of violence. The investigators interviewed participants multiple times, to assess self-reported violence on an ongoing basis. They verified participants' recollections by checking with family members, case managers, or other people familiar with the participants. Finally, the researchers also checked arrest and hospitalization records.

The study found that 31% of people who had both a substance abuse disorder and a psychiatric disorder (a "dual diagnosis") committed at least one act of violence in a year, compared with 18% of people with a psychiatric disorder alone. This confirmed other research that substance abuse is a key contributor to violent behavior. But when the investigators probed further, comparing rates of violence in one area in Pittsburgh in order to control for environmental factors as well as substance use, they found no significant difference in the rates of violence among people with mental illness and other people living in the same neighborhood. In other words, after controlling for substance use, rates of violence reported in the study may reflect factors common to a particular neighborhood rather than the symptoms of a psychiatric disorder.

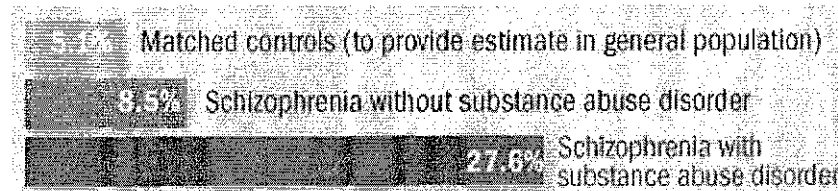
Several studies that have compared large numbers of people with psychiatric disorders with peers in the general population have added to the literature by carefully controlling for multiple factors that contribute to violence.

In two of the best designed studies, investigators from the University of Oxford analyzed data from a Swedish registry of hospital admissions and criminal convictions. (In Sweden, every individual has a unique personal identification number that allowed the investigators to determine how many people with mental

illness were convicted of crimes and then compare them with a matched group of controls.) In separate studies, the investigators found that people with bipolar disorder or schizophrenia were more likely — to a modest but statistically significant degree — to commit assaults or other violent crimes when compared with people in the general population. Differences in the rates of violence narrowed, however, when the researchers compared patients with bipolar disorder or schizophrenia with their unaffected siblings. This suggested that shared genetic vulnerability or common elements of social environment, such as poverty and early exposure to violence, were at least partially responsible for violent behavior. However, rates of violence increased dramatically in those with a dual diagnosis (see "Rates of violence compared").

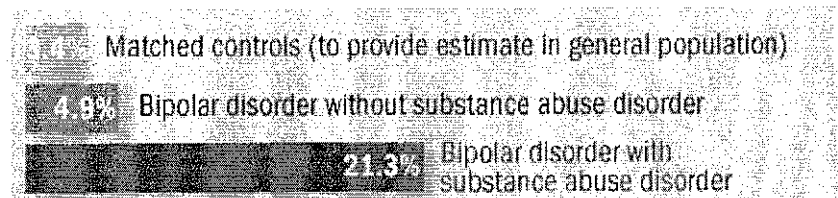
Taken together with the MacArthur study, these papers have painted a more complex picture about mental illness and violence. They suggest that violence by people with mental illness — like aggression in the general population — stems from multiple overlapping factors interacting in complex ways. These include family history, personal stressors (such as divorce or bereavement), and socioeconomic factors (such as poverty and homelessness). Substance abuse is often tightly woven into this fabric, making it hard to tease apart the influence of other less obvious factors.

Rates of violence compared



Percentage of people convicted of at least one violent crime, 1973–2006

Source: Fazel S, et al. *Journal of the American Medical Association*. May 20, 2009.



Percentage of people convicted of at least one violent crime, 1973–2004

Source: Fazel S, et al. *Archives of General Psychiatry*. September 2010.

Assessing risk of violence

Highly publicized acts of violence by people with mental illness affect more than public perception. Clinicians are under pressure to assess their patients for potential to act in a violent way. Although it is possible to make a general assessment of relative risk, it is impossible to predict an individual, specific act of violence, given that such acts tend to occur when the perpetrator is highly emotional. During a clinical session, the same person may be guarded, less emotional, and even thoughtful, thereby masking any signs of violent intent. And even when the patient explicitly expresses intent to harm someone else, the relative risk for acting on that plan is still significantly influenced by the following life circumstances and clinical factors.

History of violence. Individuals who have been arrested or acted violently in the past are more likely than others to become violent again. Much of the research suggests that this factor may be the largest single predictor of future violence. What these studies cannot reveal, however, is whether past violence was due to mental illness or some of the other factors explored below.

Substance use. Patients with a dual diagnosis are more likely than patients with a psychiatric disorder alone to become violent, so a comprehensive assessment includes questions about substance use in addition to asking about symptoms of a psychiatric disorder.

One theory is that alcohol and drug abuse can trigger violent behavior in people with or without psychiatric disorders because these substances simultaneously impair judgment, change a person's emotional equilibrium, and remove cognitive inhibitions. In people with psychiatric disorders, substance abuse may exacerbate symptoms such as paranoia, grandiosity, or hostility. Patients who abuse drugs or alcohol are also less likely to adhere to treatment for a mental illness, and that can worsen psychiatric symptoms.

Another theory, however, is that substance abuse may be masking, or entwined with, other risk factors for violence. A survey of 1,410 patients with schizophrenia participating in the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) study, for example, found that substance abuse and dependence increased risk of self-reported violent behavior fourfold. But when the researchers adjusted for other factors, such as psychotic symptoms and conduct disorder during childhood, the impact of substance use was no longer significant.

Personality disorders. Borderline personality disorder, antisocial personality disorder, conduct disorder, and other personality disorders often manifest in aggression or violence. When a personality disorder occurs in conjunction with another psychiatric disorder, the combination may also increase risk of violent behavior (as suggested by the CATIE study, above).

Nature of symptoms. Patients with paranoid delusions, command hallucinations, and florid psychotic thoughts may be more likely to become violent than other patients. For clinicians, it is important to understand the patient's own perception of psychotic thoughts, because this may reveal when a patient may feel compelled to fight back.

Age and gender. Young people are more likely than older adults to act violently. In addition, men are more likely than women to act violently.

Social stress. People who are poor or homeless, or otherwise have a low socioeconomic status, are more likely than others to become violent.

Personal stress, crisis, or loss. Unemployment, divorce, or separation in the past year increases a patient's risk of violence. People who were victims of violent crime in the past year are also more likely to assault someone.

Early exposure. The risk of violence rises with exposure to aggressive family fights during childhood, physical abuse by a parent, or having a parent with a criminal record.

Preventing violence

The research suggests that adequate treatment of mental illness and substance abuse may help reduce rates of violence. For example, in one study, the CATIE investigators analyzed rates of violence in patients who had earlier been randomly assigned to antipsychotic treatment. (Patients' own recollections were double-checked with family members.) This study found that most patients with schizophrenia who took antipsychotics as prescribed were less likely to be violent than those who did not. An exception to this general trend occurred in participants who were diagnosed with a conduct disorder during childhood. No medication proved better than the others in reducing rates of violence, but this study excluded clozapine (Clozaril).

This is important because both the CATIE investigators and other researchers cite evidence that clozapine appears more effective than other psychotics in reducing aggressive behavior in patients with schizophrenia and other psychotic disorders. One study found, for example, that patients with a diagnosis of schizophrenia or another psychotic disorder who were treated with clozapine had significantly lower arrest rates than those taking other drugs. The study was not designed to determine whether this was due to the drug itself or the

fact that clozapine treatment requires frequent follow-ups that might encourage patients to continue taking it as prescribed.

Indeed, as with psychiatric treatment in general, medication treatment alone is unlikely to reduce risk of violence in people with mental illness. Interventions ideally should be long-term and include a range of psychosocial approaches, including cognitive behavioral therapy, conflict management, and substance abuse treatment.

Of course, this sort of ideal treatment may be increasingly difficult to achieve in the real world, given reductions in reimbursements for mental health services, ever-shorter hospital stays, poor discharge planning, fragmented care in the community, and lack of options for patients with a dual diagnosis. The Schizophrenia Patient Outcomes Research Team (PORT) guidelines, for example, outlined the type of multimodal treatment necessary to increase chances of full recovery. Most patients with schizophrenia do not receive the kind of care outlined in the PORT recommendations. Solutions to these challenges will arise not from clinicians, but from policy makers.

Fazel S, et al. "Bipolar Disorder and Violent Crime: New Evidence from Population-Based Longitudinal Studies and Systematic Review," *Archives of General Psychiatry* (Sept. 2010): Vol. 67, No. 9, pp. 931–38.

Fazel S, et al. "Schizophrenia, Substance Abuse, and Violent Crime," *Journal of the American Medical Association* (May 20, 2009): Vol. 301, No. 19, pp. 2016–23.

Siever LJ. "Neurobiology of Aggression and Violence," *American Journal of Psychiatry* (April 2008): Vol. 165, No. 4, pp. 429–42.

Volavka J, et al. "Violent Behavior in Mental Illness: The Role of Substance Abuse," *Journal of the American Medical Association* (Aug. 4, 2010): Vol. 304, No. 5, pp. 563–64.

For more references, please see www.health.harvard.edu/mentalextra (/mentalextra).

Source: https://www.health.harvard.edu/newsletters/Harvard_Mental_Health_Letter/2011/January/mental-illness-and-violence

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