

Stahl's Illustrated

Chapter 1

Which Individuals Will Become Violent or Aggressive?

Chapter 1 discusses the different types of aggressive behavior (impulsive, psychotic, and psychopathic), each likely with unique neurobiological substrates. Various risk factors for violence and aggression, especially in mental illness, are also described. These risk factors include childhood maltreatment, substance abuse, cognitive dysfunction, and treatment nonadherence. In conjunction with several available violence risk assessment tools, clinical evaluation of known risk factors should aid clinicians in determining which individuals are most likely to become violent or aggressive.

The Heterogeneity of Violence

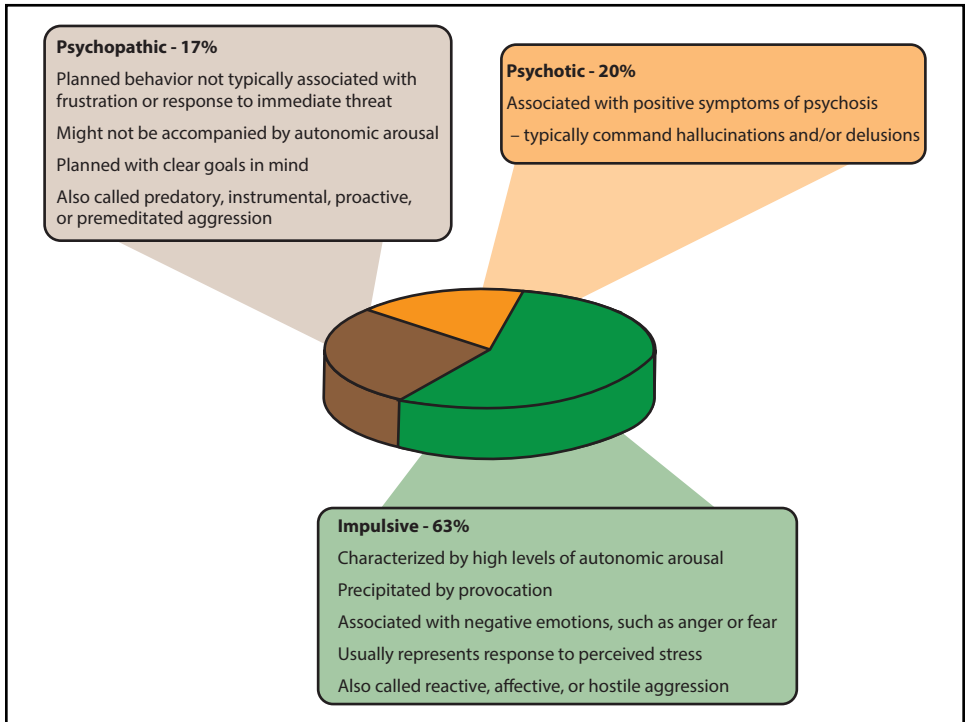


FIGURE 1.1. Aggression can be defined as hostile, injurious, or destructive behavior that may have various targets (self- or other-directed) and different modes of action (physical or verbal, direct or indirect). There are at least 3 different types of aggression, including psychotic, impulsive, and psychopathic. Approximately 20% of violent acts are of the psychotic variety; the majority of the rest are due to lack of impulse control (Nolan et al., 2003). Only a relatively small portion of violent acts are due to psychopathy; however, this type of violence seems to be the most lethal and the least responsive to treatment (Citrome and Volavka, 2011; Swanson et al., 2008; Volavka and Citrome, 2008). Each of these types of aggression may be attributable to dysfunction in distinct neural circuits. Identifying the type of aggression a patient is displaying may help guide the selection of appropriate treatments that target the underlying dysfunctional circuits. However, violence and aggression arise from a complex combination of neurobiological, genetic, and environmental factors and are often presented in the context of comorbid conditions. Thus, the assessment and treatment of violence and aggression can be quite complicated.

Impulsive Aggression



FIGURE 1.2. Impulsive, or reactive, aggression involves no planning and is usually an immediate response to an environmental stimulus. Impulsive aggression may reflect emotional hypersensitivity and exaggerated threat perception.

Psychotic Aggression

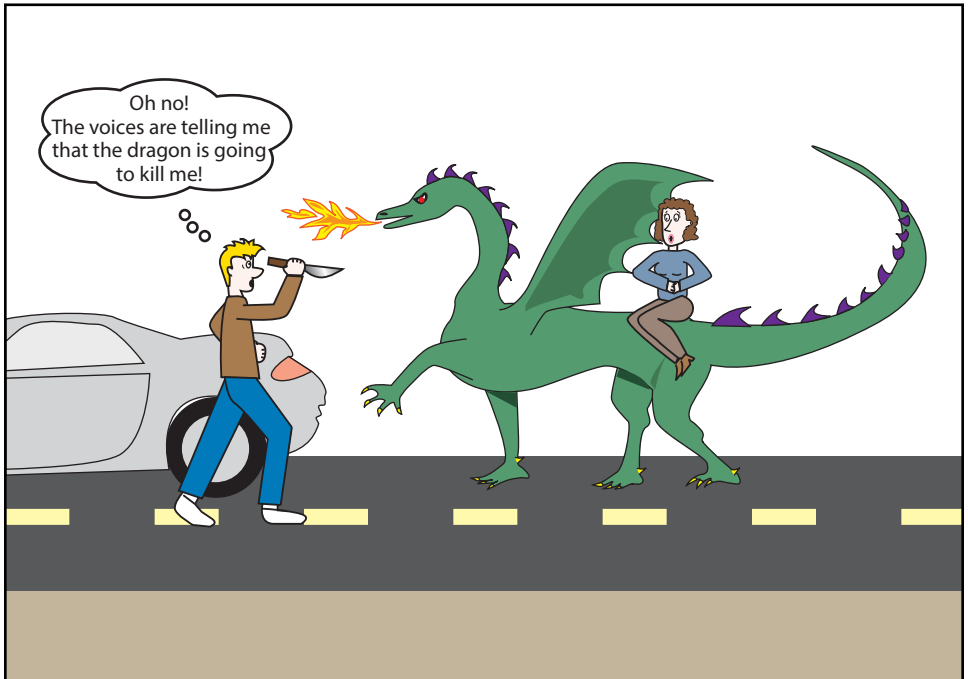


FIGURE 1.3. Psychotic violence is attributable to positive symptoms of psychosis, most commonly paranoid delusions of threat or persecution, command hallucinations, and grandiosity. Such psychotic symptoms may lead to violent behavior due to the assailant misunderstanding or misinterpreting environmental stimuli. In line with this, a recent study determined that 59% of individuals with schizophrenia who had committed acts of homicide were experiencing delusions, with a worsening of delusions in the months leading up to the homicidal act.

Psychopathic Aggression

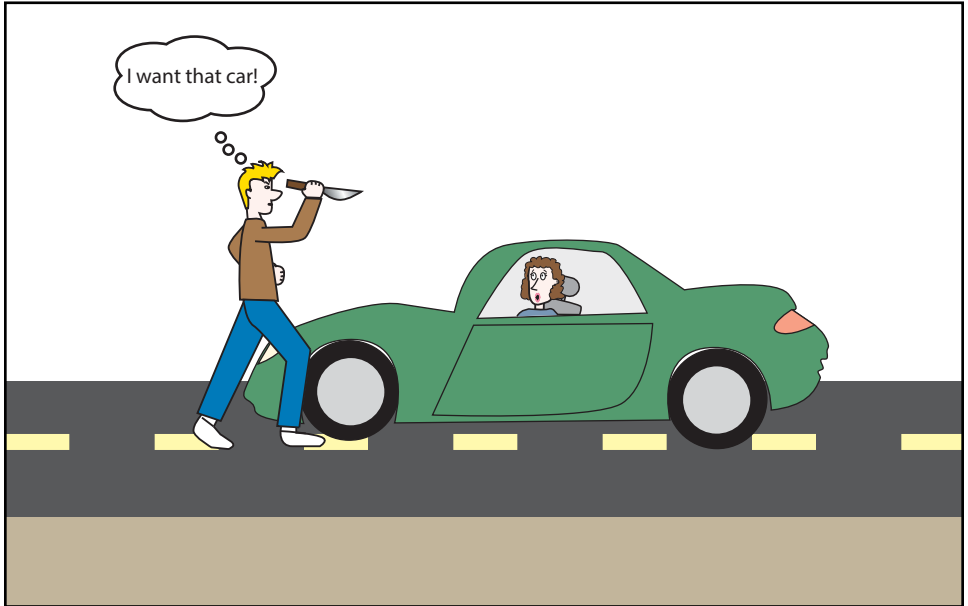


FIGURE 1.4. Psychopathic violence involves aggressive acts characterized by the planning of assaults, predatory gain, and lack of remorse.

Risk Factors for Violent Behavior

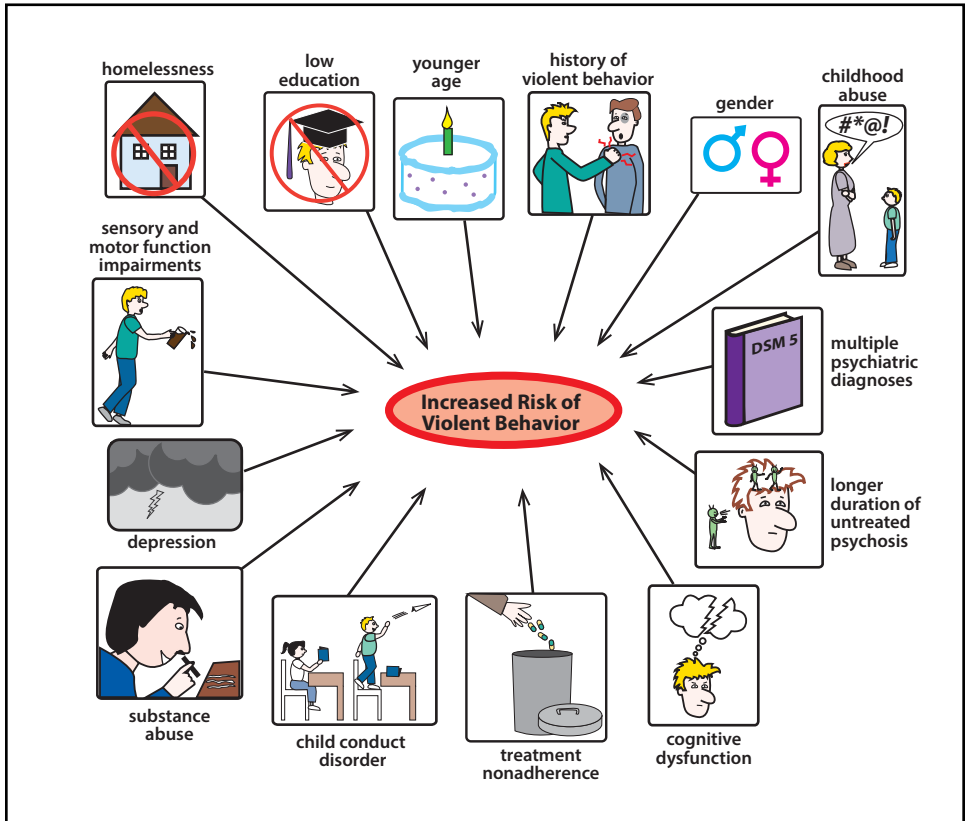


FIGURE 1.5. Several factors have been associated with a risk of violent or aggressive behavior, including a history of prior violence, childhood conduct disorder, childhood abuse or trauma, substance abuse, low education, younger age (under 25 years), homelessness, sensory and motor function impairments, cognitive dysfunction, including poor illness insight, low treatment satisfaction, longer duration of untreated psychosis, treatment nonadherence, depression, multiple psychiatric diagnoses, and possibly gender.

Child Abuse as a Risk Factor for Violent Behavior

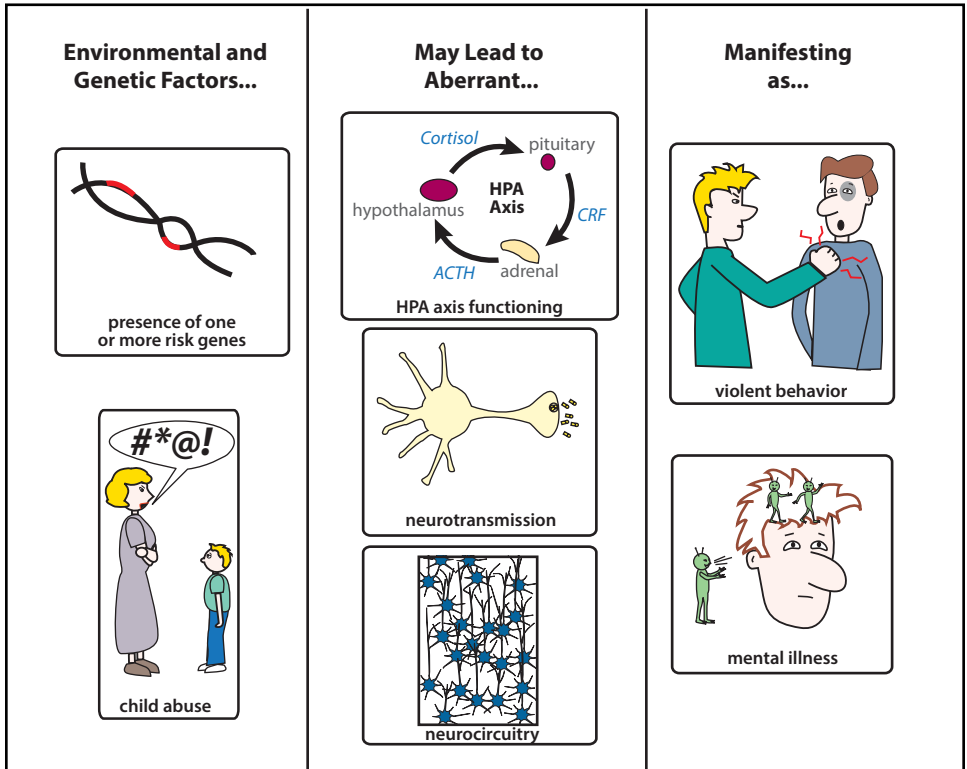


FIGURE 1.6. Childhood abuse or neglect has been linked to an increased risk of delinquency and violent criminal behavior as well as measures of lifetime aggression. Maltreatment at a young age may have detrimental effects on the developing brain, leading to aberrant neural circuitry and maladaptive neurotransmitter release. Data also indicate that highly aggressive behavior is correlated with low cortisol levels. Interestingly, childhood trauma may cause dysfunction in stress response behavior by altering stress hormone (e.g., cortisol) levels and impairing hypothalamic-pituitary-adrenal (HPA) axis functioning. Individuals who are at an increased biological risk of the development of mental illness due to genetic factors may be particularly vulnerable to the detrimental effects of adverse psychosocial experiences.

Substance Abuse as a Risk Factor for Violent Behavior

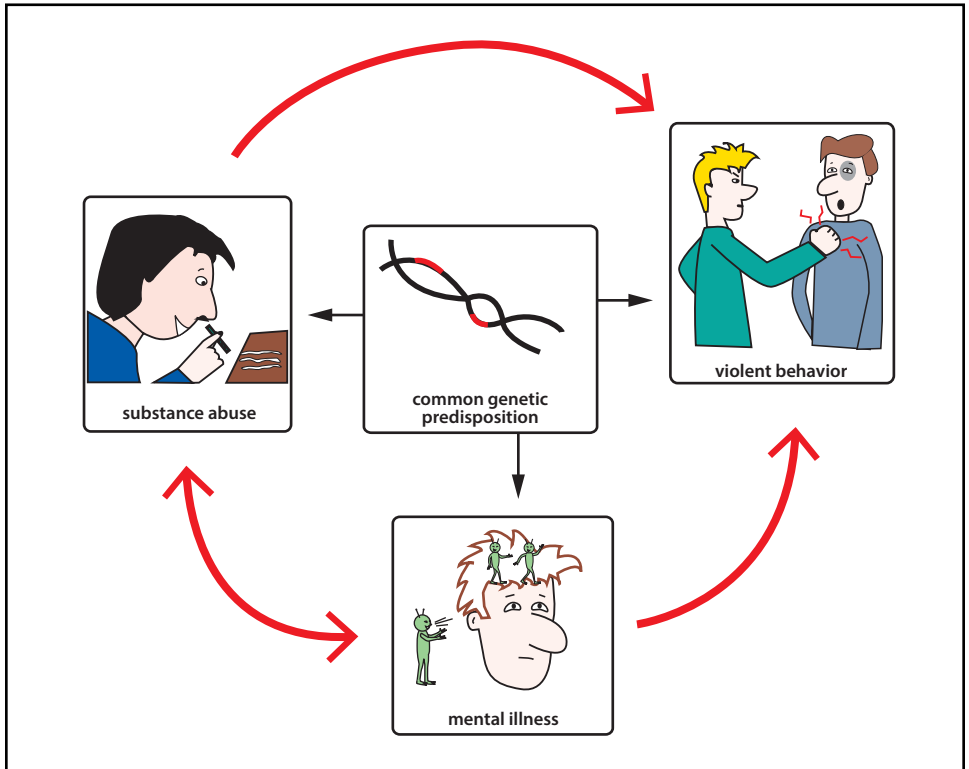


FIGURE 1.7. Substance use disorder (SUD) in and of itself confers an increased risk of violence. SUD is highly prevalent in patients with mental illness; however, the exact relationship between SUD, mental illness, and aggression is not fully understood (Fazel et al., 2009a; Fazel et al., 2009c). It is possible that mental illnesses such as schizophrenia and bipolar disorder predispose individuals to the development of SUD as well as violent or aggressive behavior. It is also possible that SUD increases the risk of developing a psychiatric disorder and exhibiting violent or aggressive behavior. Furthermore, substances of abuse may lead to violent or aggressive acts due to their disinhibitory effects on impulse control. It is also possible that there is a common genetic susceptibility underlying certain psychiatric disorders, SUD, and aggressive behavior. Regardless of the exact mechanism underlying the correlation between mental illness, SUD, and violence, it is clear that addressing substance abuse may help prevent acts of violence and aggression.

Schizophrenia May Increase the Risk of Violent Behavior

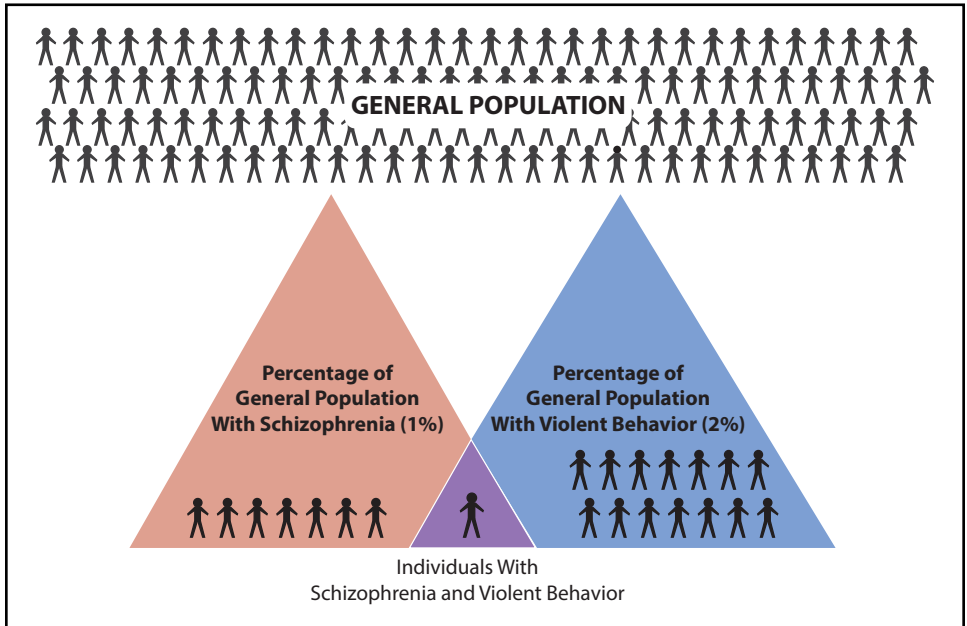


FIGURE 1.8. Although not all patients with mental illness are violent or aggressive, there is a small subset of the mentally ill population who are at a higher risk of violent behavior than the general population. In fact, patients with schizophrenia are at a 4–6-fold increased risk of exhibiting violent or aggressive behavior. As many as 10% of individuals with a psychotic disorder are violent; in comparison, only 2% of individuals in the general population display such behavior (Fazel and Grann, 2006; Fazel et al., 2009a; Fazel et al., 2009b). This prevalence value may actually be underestimated, as one recent study indicated that within a 6-month time frame, as many as 50% of patients with schizophrenia had committed an act of violence (Fazel et al., 2009a). In terms of severely violent behavior (e.g., homicide), individuals with psychosis may be as high as 20 times more likely than the general population to commit acts of severe violence. However, only 5.2% of severely violent crimes are committed by individuals with a psychiatric disorder, most commonly schizophrenia (Fazel and Grann, 2006). Thus, although we strive to avoid the misconception that all patients with schizophrenia are violent, the data indicate that schizophrenia, especially when untreated, significantly increases the risk of displaying violent behavior. It should be emphasized that violence occurs not because of a diagnosis of schizophrenia in and of itself; rather, violence is often associated with acute psychotic states.

The Cost of Violence in Schizophrenia

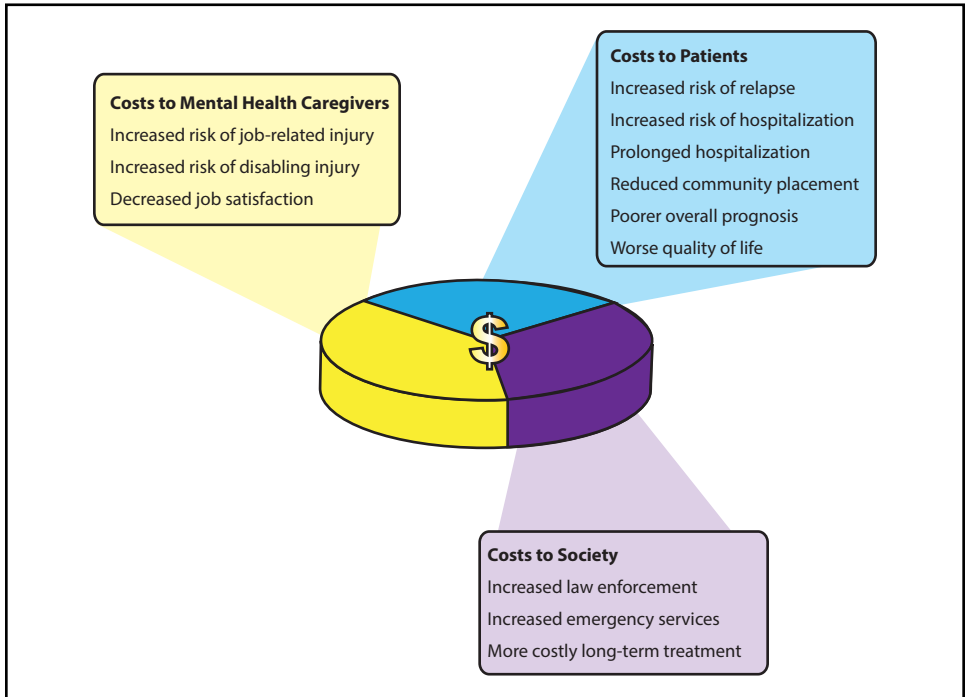


FIGURE 1.9. Violent behavior in patients with schizophrenia has several costs to patients, mental health caregivers, and society. For the patient, violent behavior has been shown to prolong inpatient duration and inhibit community placement. In general, violent behavior is also associated with a poorer prognosis. Mental health caregivers may be at a greater risk of experiencing job-related violent crime than workers in many other occupations (Anderson and West, 2011). In fact, approximately 25% of psychiatric nurses may be the victim of a patient assault that results in disabling injury (Quanbeck et al., 2007).