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SUICIDE: PART 1

The Link Between Substance Abuse, Violence, and Suicide

Implications and Interventions

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Suicide is the 11th leading cause of death in the United States; it accounts for more than 34,000 deaths per year.¹ And an even greater number of people attempt suicide. Based on data from community surveys, approximately 5% of adults have made a serious suicide attempt.²

Mental health problems are some of the best-known and well-studied risk factors linked to suicidal ideation, suicide attempts, and suicide mortality.

Approximately 90% of all individuals who completed suicide met criteria for 1 or more diagnosable psychiatric conditions. Mental health conditions most strongly associated with fatal and nonfatal suicide attempts include depression, bipolar disorder, schizophrenia, posttraumatic stress disorder, and [alcohol \(Drug information on alcohol\)](#) and/or drug use disorders.²⁻⁴ Because mental health

treatment providers are in regular contact with patients at risk for suicide, they are an important resource for early detection and prevention of suicidal behavior.

Substance use and suicide risk

Although it is difficult to compare the relative impact among different mental health problems with the risk of suicide, alcohol and drug use disorders have been found to be strongly related to suicide risk.^{3,5} Individuals with a substance use disorder (ie, either a diagnosis of abuse or dependence on alcohol or drugs) are almost 6 times more likely to report a lifetime suicide attempt than those without a substance use disorder.² Numerous studies of individuals in drug and alcohol treatment show that past suicide attempts and current suicidal thoughts are common.⁶⁻⁸ Recent evidence from veterans indicates that men with a substance use disorder are approximately 2.3 times more likely to die by suicide than those who are not substance abusers. Among women, a substance use disorder increases the risk of suicide 6.5-fold.⁹

Identifying substance abusers at greatest risk for suicide

Although a consistent association exists between substance use disorders and suicidal behaviors, the vast majority of those with substance-related problems will never die by suicide. Therefore, it is important to identify those individuals with substance use disorders who might be at particularly high risk for suicide.

Many risk factors for suicide in the general population also apply to those with substance use disorders. Older men with substance use disorders are at greater risk for nonfatal attempts and for death by suicide than are younger persons.^{10,11} Past suicide attempts are a strong risk factor for subsequent suicidal behaviors in those with substance use disorders.¹² Depressed mood is a risk factor for suicidal behaviors in the general population and also predicts a greater likelihood of suicide in those with alcohol or drug use disorders.^{3,6,10} The link between depression and suicidal behaviors in those with substance use disorders may be particularly strong given the high comorbidity between mood and substance use disorders.¹³ Although it has not been examined thoroughly, independent mood disorders and substance-induced mood disorders are likely to confer risk for suicide.

Emerging research suggests that some individuals with particular types of substance use and abuse may be more likely to engage in suicidal behaviors. For example, individuals who use opiates, cocaine, and sedatives may have a noticeably higher risk of suicide than those who use other drugs.^{12,14-16} Among those with an alcohol use disorder, a greater severity of recent drinking is associated with the greater likelihood of suicide attempt and suicide mortality.^{17,18} Co-occurring alcohol and drug use disorders may be particularly strong indicators of increased risk of suicide.¹⁹ Thus, the severity of substance use disorders (ie, a greater number of substances or misuse of more than 1 substance) may predict a greater likelihood of suicide.

Violent behavior toward others

The tendency to engage in violent behavior is a potentially important risk factor for suicide in substance abusers. Up to 75% of those who begin addiction treatment report having engaged in violent behavior (eg, physical assault, mugging, attacking others with a weapon).^{20,21} Emerging research also indicates that violence may partially account for the connection between substance abuse and suicide risk. For example, in those seeking treatment for substance use disorders, the perception that they have difficulty in controlling their own violent behavior was associated with a greater likelihood of a prior suicide attempt.²² Tiet and colleagues²² hypothesized that individuals who have difficulty in controlling their anger may be more likely to act impulsively, thus turning the violence on themselves rather than on others.

Individuals with alcohol use disorders and prior aggressive behavior are more likely to report suicidal thoughts or past suicide attempts.^{6,23} In one recent study of more than 6000 adults who began addictions treatment, those who had committed serious violent acts (eg, rape, murder, assault resulting in serious injury) were more than twice as likely to report multiple suicide attempts. This finding held true even after statistically controlling for demographic characteristics, depression, and past victimization.⁶

Another study compared accident victims with individuals who completed suicide. Violent behavior in an individual's last year of life was linked to a higher likelihood of suicide, even when controlling for alcohol use disorders and other potential suicide risk factors.²⁴

What is already known on this topic?

A growing body of literature has identified the link between substance use disorders, interpersonal violence, and risk of suicide.

What new information does this article offer?

This article reviews this literature and provides suggestions for how to identify substance use disorder patients who may be at elevated risk for suicide.

What are the clinical implications?

Mental health providers should be aware that individuals with substance use disorders are at elevated risk for suicide and should include questions about prior violence toward others as part of a comprehensive suicide risk assessment.

Partner violence

Violence toward a romantic partner may be a particularly important predictor of suicidal thoughts and behaviors in individuals with substance use disorders. In a study that examined data from a sample of 488 individuals who began substance and alcohol treatment, physical aggression toward a partner was associated with higher levels of suicidal ideation than was aggression toward a nonpartner.²⁵ In addition, a history of domestic violence is common in men with alcohol use disorders who complete suicide.²⁶ Individuals who perpetrated domestic violence were more likely to be separated from their partners; they therefore lacked social support (a key protective factor of suicide risk).

Understanding the link between violence and suicide risk

Several factors can explain why engaging in interpersonal violence is associated with increased risk of suicidal behaviors in those with substance use disorders. Violence correlates with greater severity of substance abuse; thus, violent behavior may be a proxy indicator for the relationship between severity of substance abuse and suicide risk.^{17-19,27}

Moreover, violence may be an indicator of increased impulsivity, which has been found to increase the risk of suicide.²⁸ The relationship between impulsivity as an independent entity (distinct from aggression) and suicide risk has been rarely studied. One study that examined impulsive aggression (ie, reactive aggression) found that it did not increase the likelihood of suicide attempt in comparison with premeditated aggression (ie, proactive aggression).²⁹

Self-report measures of impulsivity appear less closely associated with suicidal behaviors than laboratory measures of impulsivity.³⁰ The literature does not provide a clear indicator of whether impulsivity fully or partially explains the link between violence and suicidal behaviors.

Another possible explanation for the link between violence and suicide is that violence, particularly partner violence, can create significant social isolation, which increases the risk of suicide.²⁶ Also, Joiner³¹ proposed that individuals who harm themselves have acquired the capacity to engage in self-injury through repeated exposure to violence and painful stimuli. Inflicting an injury on someone else may be a form of behavioral rehearsal for suicidal behaviors.

Clinical implications

Causal mechanisms that explain the links between substance misuse, violence, and suicidal behaviors are not fully understood. Nevertheless, the literature provides several important clinical implications for mental health treatment providers. In all settings, it is important to incorporate questions about violent behavior and substance abuse into broader assessments of suicide risk. Clearly, patients who report a combination of past suicide attempts and/or serious plans of suicide, depression, significant substance misuse, and episodes of interpersonal violence are at significantly elevated risk for future suicidal behaviors. For such patients, treatment that focuses on only 1 of these domains (eg, depression) may not be optimally effective.

- Treatment providers should develop a strategy that directly addresses each of these problems and contains specific steps for managing an acute suicidal crisis.
- Treatment providers should consider prescribing medications that directly address the addictive disorder and/or make referrals to specialty addiction treatment facilities.
- Treatment providers should consider referring violent patients to anger management therapy or to couple's behavioral therapy designed to address aggressive behaviors and improve interpersonal problem solving and communication.

Research is needed to determine whether such integrated treatment effectively reduces suicidal behaviors in high-risk individuals with substance use disorders and/or violent behavior.

Cognitive-behavioral therapy (CBT) focuses directly on suicidal thoughts and behaviors. A large, randomized, controlled trial found that CBT significantly decreased the likelihood of suicidal behaviors over 18 months of follow-up.³² Recently, we have developed a modified version of CBT that focuses specifically on suicidal behaviors in those with substance use disorders. Although the evaluation of this intervention is ongoing, patients appear to appreciate the opportunity to discuss the links between their substance abuse, prior impulsive behaviors, and suicide attempts.

Even without a specific CBT approach, the therapeutic relationship can benefit from a direct discussion of the patient's perception of the connections between his or her substance abuse, tendency to become violent with others, and prior suicide attempts.

CASE VIGNETTE

Frank is 45 years old, unemployed, and undergoing court-ordered residential treatment for cocaine dependence following his arrest for drug possession. He reports that he began drinking heavily and using cocaine and marijuana on a regular basis during his late teens. He also reports experiencing frequent "up and down" moods that coincide with his drug use. He has been in numerous romantic relationships, many of which involved physical and verbal altercations.

Frank has received inpatient treatment for his addictions in the past. On one occasion, he left treatment early; he completed treatment twice, only to relapse within a week. Frank has made 2 suicide attempts.

In previous treatment, he mentioned his suicide attempts, but the response was either focused on his safety (eg, assigning him a “buddy” to accompany him to the restroom) or an antidepressant or mood stabilizer was prescribed.

We added 8 sessions of CBT (2 sessions a week for 4 weeks) for suicidal thoughts and behaviors to standard residential drug treatment. We took a detailed history of Frank’s earlier suicide attempts and identified his perception of the link between his substance abuse, his feelings of frustration or anger, and his suicidal thoughts and behaviors. Much of this work was focused on helping him conceptualize suicidal thoughts as something that he could manage and that does not require him to take action.

With our help, Frank was able to develop a detailed list of steps that he could take to keep himself safe when he is feeling suicidal. Frank and the therapist also discussed reasons to be hopeful and ways that he could remember these reasons posttreatment. The final CBT sessions involved an imaginary exposure exercise during which Frank was asked to recall his most recent suicide attempt and then envision himself seeking help before making the attempt.

Overall, Frank seemed to appreciate the intervention, and he described the focus on his suicidal behavior as unique and helpful. The relative safety and stability of a residential addictions treatment facility allowed us to focus directly on content related to Frank’s suicidal thoughts, plans, and suicide attempts. Frank stayed for the full 60 days and plans to stay with his brother after discharge. He is part of an ongoing pilot CBT trial and will be followed up 3 months after leaving treatment.

Summary

Research indicates that substance misuse is consistently associated with suicidal thoughts, suicide attempts, and suicide mortality. The risk of suicide is likely to be greater in persons with more severe levels of substance abuse as well as in those with depression. In addition, a propensity to engage in interpersonal violence is an important suicide-related risk factor. These findings reinforce the need for increased suicide assessment and intervention efforts to address co-occurring problems in individuals with substance use disorders and/or interpersonal violence.

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