Addressing Suicidal Thoughts And Behaviors in Substance Abuse Treatment: A Review of the Literature*

Update

Reviews Literature From January 2009 through December 2010

Treatment Improvement Protocol (TIP) Series

50

Contents

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UPDATED FINDINGS FROM THE LITERATURE, DECEMBER 2010

Contents

Updated Findings From the Literature, December 2010

This Treatment Improvement Protocol (TIP) Literature Review update includes findings published between January 2009 and December 2010.

Findings on Risk Assessment

Conrad et al. (2009) evaluated the reliability and validity of the Suicide Status Form-II (SSF-II) by assessing suicidal risk in 149 people in psychiatric units, of which 108 patients were at risk for suicide and 41 members of a control group were not. Of those at risk for suicide, 79 patients presented with suicidal ideation and 29 patients had a history of suicidal behavior. Fifty-nine patients had co-occurring substance use disorders (SUDs). The SSF-II contains six rating scales, including psychological pain, stress, agitation, hopelessness, self-hate, and overall risk of suicide and was shown to be a convenient and psychometrically reliable and valid instrument for meaningfully assessing suicide risk. Limitations of the study included its small sample size and lack of ethnic diversity within the sample.

A multisite retrospective study of 700 Swiss inpatients being treated for alcohol use disorders (AUDs) was conducted to develop a decision tree for the purpose of identifying predictors of attempted suicide (Buri, von Bonin, Strik, & Moggi, 2009). The researchers compared, using risk factors, 69 patients who had attempted suicide during the three months prior to beginning treatment with 631 patients who had not. It was found that patients with a prior history of attempted suicide, aggression, and severe depression were significantly more likely to attempt suicide than those without those risk factors and that these three factors in combination increased the likelihood of a prior attempted suicide to 52 percent. The authors concluded that the decision tree they had developed was helpful in identifying people with AUDs and who are likely to attempt suicide. Once such patients were identified, suicide prevention efforts could be instituted.

Ilgen, Downing et al. (2009 developed a decision tree based on an empirically based decision analysis. The researchers used information from patient records from FY 1998 and 1999 and data from the National Death Index to examine interactions among several suicide risk factors in a cohort of 887,859 patients with depression treated in the Veterans Affairs health system. Researchers identified subgroups with significantly high or low rates of suicide during a 7-year follow-up period, during which 7,684 veterans committed suicide. Persons with SUDs who were admitted as inpatients for treatment of mental health disorders within the previous 12 months and were non-African American were at highest risk for suicide. Male patients with bipolar disorder and female patients with SUDs were especially at risk. The authors concluded that the examination of higher-order interactions among potential risk factors improves the reliability of identifying increased suicide risk among patients who are depressed.

The association between self-reported suicidality and anxiety symptoms in 2,778 psychiatric outpatients was studied by Diefenbach, Woolley, and Goethe (2009). A bivariate analysis revealed that patients with moderate to high levels of anxiety had a twofold increase in suicidality. The authors suggested using a single-item anxiety self-report screening tool for a preliminary assessment of suicide risk.

Iliceto and colleagues (2010) studied risk of suicide by measuring hopelessness (a major suicide risk factor), health perception, and temperament among 100 people who were heroin-dependent and undergoing treatment and 100 age-matched people who did not use heroin. The 20-item Beck Hopelessness Scale (BHS); the first (2005) version the 84-item Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Autoquestionnaire (TEMPS-A Rome); Mini-International Neuropsychiatric Interview (which contained questions about past and current suicidality); and the 100-item Multidimensional Health Questionnaire were used to assess health attitudes in people who use heroin and to establish treatment plans accordingly. Hopelessness was positively associated with depression, anxiety, preoccupation with health, self-blame regarding illness, negative thinking about health, and health monitoring. It was concluded that people who use heroin were distinguishable from those who do not on these bases and that special care may be needed to prevent suicide attempts by people who use heroin in light of their history of suicidal behavior.

The seven-item Affective States Questionnaire (ASQ) was found to have 60 percent sensitivity and 74 percent specificity with respect to predicting suicidal behavior that occurred during three months of followup of 240 outpatients at a Veterans' Affairs Medical Center. Participants were combat veterans, some of whom had recently returned from combat in the war in Iraq. The major Axis I diagnoses of study subjects were anxiety disorders (41 percent), major depressive disorder (MDD) (33 percent), post-traumatic stress disorder (PTSD) (20 percent), and bipolar disorder (16 percent). The major secondary Axis I disorder was SUD (43 percent). False positives were reduced when the use of the ASQ was combined with a diagnosis of SUD or an assessment of disability level. The strength of the instrument appeared to lie in the absence of suicide-related questions and its emphasis on substance use, disability level, and affective state of participants (Hendin, Al Jardi, Houck, Hughes & Turner, 2010).

Findings on Co-occurring Conditions and Risk Factors for Suicidality

Niciu and colleagues (2009) differentiated major depressive episode (MDE) subtypes among individuals (N = 1,929) with substance use disorders. Study participants were recruited both from those seeking treatment and from the community. The investigators used the Semi-Structured Assessment for Drug Dependence and Alcoholism and, at the time of its administration, asked about the participants' substance use during each depressive episode. The subjects were then categorized into four subtypes having:

- No lifetime major depressive episode (N-MDE) (55.3 percent, n = 1066)
- Independent MDE only, not substance related (I-MDE) (8.1 percent, n = 156)
- Substance-induced MDE only (SI-MDE) (27.9 percent, n = 539)
- Both types of MDE (B-MDE) (8.7 percent, n = 168)

By far, the patients with the highest rate of suicidality were those with histories of both types of MDE: nearly 73 percent had suicidal ideation and approximately 41 percent attempted suicide. An average of 56 percent of patients with I-MDE or SI-MDE had suicidal ideation and an average of 23 percent attempted suicide. In contrast, only 26 percent of subjects with N-MDE had suicidal ideation and only 7 percent attempted suicide. The study also found that those with both types of MDE reported more lifetime depressive symptoms and co-occurring anxiety

disorders and that this group was more likely to have attempted suicide than subjects with either I-MDE or SI-MDE. The study underscores the potential importance of the MDE subtyping of patients with SUDs and accordingly classifying their risk for suicidal ideation and behavior.

Sublette and colleagues (2009) performed logistic regressions to study suicidal behavior in adults with MDE in the context of differences between bipolar disorder type I (BD-I) and type II (BD-II) with respect to SUD as a risk factor for suicidal behavior. Patients with BD-1 who had both drug use disorders and AUDs had a suicide attempt rate of 97 percent. Suicide was attempted by 93 percent of individuals with BD-I and drug use disorders and by 89 percent with AUDs. Although rates of SUDs were the same in patients with BD-I (n = 96) and BD-II (n = 42), a history of SUDs was associated with suicide attempts in patients with BD-I–but not in those with BD-II. Higher suicide attempt rate association with alcohol use in BD-I was explained by higher aggression scores and an earlier age of onset than those associated with BD-II. The association of the rate of suicide attempts in patients with other SUDs appeared to be related to higher hostility, aggression, and impulsivity scores on standard assessment instruments. The study was limited because of (1) its retrospective design, (2) small sample size, , and (3) the inclusion of subjects who were mostly in an MDE. In addition, the sample studied was referred and included a large number of persons who had attempted suicide. The study suggests that treating co-occurring SUDs and addressing aggressive/impulsive traits in subjects with BD-I are critical in reducing suicidal ideation and behavior.

Treatment records of 10,667 persons with SUDs and acutely admitted to an urban, university-staffed hospital psychiatric service over a period of approximately 10 years were analyzed to evaluate the relationship of SUDs and the severity of their effects on suicidality. Researchers found that 41 percent of the patients showed little to no suicidality, 26 percent had moderate suicidal urges and had made plans to commit suicide, and 32 percent exhibited active suicidal behavior or had attempted suicide. This study identified a co-occurring disorder population of patients with acute, mostly nonpsychotic psychiatric disorders, with co-occurring addiction and suicide that requires active intervention. It also showed that level of suicidality was proportional to severity of substance use (Ries, Yuodelis-Flores, Roy-Byrne, Nilssen, & Russo, 2009).

Hills, Afifi, Cox, Bienvenu, and Sareen (2009) studied whether externalizing psychopathology, including SUD, is a risk factor for later suicide attempts. The authors studied cross-sectional and longitudinal data gathered from adult responders from the Baltimore Epidemiological Catchment Area Study. At one-year followup, new suicides were associated with externalizing psychopathology in 3,163 subjects. Externalizing psychopathology was not associated with first-time suicide attempts in 1,920 subjects. Both of these data sets were obtained after adjusting for sociodemographic factors and internalizing disorders. The investigators concluded that the assessment of individuals presenting with externalizing disorders is of significant value in predicting suicidality.

A case control design was used to study the association of borderline personality disorder (BPD) and impulsivity as risk factors for suicidality among 775 people with opioid dependence, who were shown to be more likely than controls (people without opioid dependence) to screen positive for BPD and to be classified as highly compulsive. Opioid dependence alone was not a significant risk factor for suicide attempts among people with opioid dependence and those with BPD or high impulsivity. The study demonstrates the importance of assessing impulsivity of

persons who have a history of suicidality. Limitations of the study included a lack of balance between patient and control groups and reliance on self-reported information (Maloney, Degenhardt, Darke, & Nelson, 2009).

Co-occurring PTSD and other mental disorders—and not PTSD alone—account for an increased lifetime frequency of suicide attempts (LFSA) among patients with SUDs (Cacciola, Koppenhaver, Alterman, and McKay, 2009). This study examined a cohort of male veterans (N = 466) recently admitted to outpatient treatment for SUDs. The participants were divided into four groups, according to diagnosis. These include:

- SUDs only.
- SUDs and PTSD without any other Axis I disorders.
- SUDs, no PTSD, and other Axis I disorders.
- SUDs, PTSD and other Axis I disorders.

Results follow:

- Almost half (n = 230) were diagnosed with SUDS only. This group had a very low rate of LFSA (9 percent).
- Those diagnosed with SUDs and PTSD but no other Axis I disorders (n=21), reported no LFSA.
- Of those diagnosed with SUD, no PTSD, and no other Axis I disorders (n = 154), 32 (21 percent) participants reported LFSA.
- Those diagnosed with SUDs, PTSD, and other Axis I disorders (n = 61) had the highest rate (41 percent or 24 respondents) reporting LFSA.

The study provided evidence for the importance of taking into account the presence of other mental disorders in patients with co-occurring SUDs and PTSD, but may be limited by the small sample size.

Associations between anxiety disorders and suicidality were studied by Cougle and colleagues (2009), using data from the National Comorbidity Survey-Replication (NCS-R) Study, a national household survey of 9,282 adults living in the United States. The survey used the diagnostic assessment of Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM-IV-TR) mental disorders to assess participants in the survey and included questions related to suicidal behaviors. Members of a subsample of 4,131 individuals were interviewed with regard to lifetime suicide attempts and ideation. Multivariate logistic analysis revealed that AUDs were associated with significantly increased lifetime suicidal ideation (adjusted odds ratio (AOR) of 2.08) and lifetime suicide attempts (AOR 2.19).

In addition, SUD was associated with significantly increased lifetime suicidal ideation (AOR of .97) and lifetime suicide attempts (AOR 1.11). Various anxiety disorders, including generalized anxiety disorder (GAD), PTSD, social anxiety disorder (SAD), and panic disorder were found to be associated with suicidal ideation, but only GAD, PTSD, and SAD were shown to be associated with suicide attempts. The study provides further evidence of the consequences of anxiety disorders and the need to detect and treat them at an early stage to prevent suicidality. It also emphasizes the importance of suicide risk assessment in treating individuals with anxiety

disorders and how the evaluation of the presence of anxiety disorders as independent risk factors can aid it. Study limitations included gender differences not being considered and that data collected was not sufficient to definitively establish causality between anxiety disorders and suicidal behavior.

Similarly, Nock, Hwang, Sampson, and Kessler (2010) studied associations between specific mental health disorders and subsequent suicidal attempts, plans, and ideation. Among a subsample of 5,692 individuals included in the NCS-R, anxiety, mood, and SUDs were strongly associated with subsequent suicide attempts. The analysis also indicated that, although depression predicts the onset of suicidal ideation, it does not predict suicide attempts or the presence of plans in those where ideation is present. The researchers found that the presence of severe anxiety disorders (such as PTSD) and poor impulse control (e.g., SUDs and conduct disorder) were highly predictive of a patient with suicidal ideation making suicide attempts or plans.

Nepon, Belik, Bolton, and Sareen (2010) examined the relationship between anxiety disorders and suicide attempts by performing multivariate regression model analysis of data from interviews of 34,653 adults in the National Epidemiologic Survey on Alcohol and Related Conditions Wave 2. They found that anxiety disorders appeared to be significantly associated with suicide attempts and that panic disorder and PTSD, occurring alone or together, was or were independently associated with suicide attempts as well. However, causal relationships could not be established because of data collection methods used. In addition, the frequency of obsessive compulsive disorder in the study sample, which could have contributed to the level of suicidality observed, was not addressed.

Smith and Book (2010) provided preliminary evidence of the prevalence and clinical characteristics of co-occurring GAD and AUDs in 39 outpatients. More than 46 percent were found to have current GAD, and the onset of GAD occurred prior to AUDs in 67 percent of co-occurring cases. A history of suicide attempts was found in 55.6 percent of patients with co-occurring GAD and AUD. The researchers suggest that GAD may be a prevalent and relevant factor among individuals seeking outpatient AUD treatment.

Bivariate and multivariate models were used to study the relationship between partner and non-partner aggression and recent suicidal thoughts in 488 patients undergoing treatment for SUDs. Ilgen, Chernack et al. (2009) found that 33 percent of the sample had suicidal thoughts. Physical and psychological aggression towards a partner were significantly associated with suicidal ideation. However, both forms of aggression towards a person who was not a partner were not significantly associated with suicidal ideation of the patient. However, the study only assessed suicidal ideation and is not necessarily generalizable to suicide attempts.

A recent study showed that, among a sample of 6,233 individuals (from the large, multisite National Treatment Improvement Evaluation Study) entering treatment for SUDs, self-reported suicidal ideation and single or multiple suicide attempts were strongly associated with prior lifetime violent behaviors. This was significantly more so among individuals who had committed more serious forms of violence, such as rape and homicide. The authors concluded that treatment providers should be aware that those patients with SUDs and life-time histories of committing

the most severe forms of violence are at significant risk for suicidal behavior (Ilgen, Burnette, et al., 2010).

The relationships among three forms of violence—including nonsuicidal self-harm, having experienced physical assault, and attempting suicide—were examined among 400 individuals who regularly used either psychostimulants, heroin, or both. Strong inter-relationships were found between these forms of violence and that all individuals who had attempted suicide also had a history of violent assault. The researchers suggested that it is important for treatment providers to be aware of the high rates of violent experiences—as either a victim or a witness—among individuals who use illicit drugs regularly and that appropriate screening for a history of nonsuicidal self-harm, physical assault experiences, and suicide attempts is important in suicide prevention. A person who uses illicit drugs and also has a history of being assaulted or nonsuicidal self-harm is significantly more likely to plan or attempt suicide. A limitation of the study was that all information gathered was based on self-reports (Darke, Torok, Crim, Kaye, and Ross, 2010).

Le Strat, Ramoz, and Gorwood (2010) studied the pattern of psychiatric comorbidity associated with nicotine dependence among members of a cohort of 4,782 individuals with lifetime alcohol dependence who participated in the 2001–2002 National Epidemiologic Survey on Alcohol and Related Conditions. Approximately 48 percent of respondents who were alcohol-dependent were also nicotine-dependent and reported higher lifetime rates of other SUD, GAD, panic attacks, MDD, suicide attempts, and other mental health problems than those who were not nicotine-dependent. The researchers concluded that nicotine dependence represents a general marker for suicidality, SUDs, and other psychiatric co-occurring disorders.

Leeies, Pagura, Sareen, and Bolton (2010) examined self-medication using alcohol, drugs (illicit or prescription), or both, by 2,643 patients with PTSD who were non-institutionalized and community-dwelling and participated in the National Epidemiologic Survey on Alcohol and Related Conditions. More than 21 percent of individuals with PTSD engaged in self-medication behavior, which was associated with a significantly higher likelihood (adjusted odds ratio = 2.46) of suicide attempts. However, the study design precluded the determination of causality, and the severity of PTSD and the amount of substance use were both unknown.

Wenzel, Brown, and Beck (2009) provided a comprehensive overview of cognitive therapy for suicidal patients with SUDs. They outlined the following treatment regimen:

- Early Phase of Treatment: The practitioner (a) conducts an assessment of the presenting problem; (b) develops a safety plan with the patient; (c) develops a cognitive case conceptualization that involves identifying and characterizing the patient's dispositional vulnerability factors, early experiences, beliefs (core, anticipatory, relief-oriented, and permissive), key automatic thoughts, and suicide-relevant cognitive processes; and (d) establishes treatment goals with the patient.
- Intermediate Phase of Treatment: The practitioner helps the patient (a) increase the number of reasons for living; (b) develop coping strategies; (c) increase compliance with other services; and (d) improve social resources.

- Late Phase of Treatment: The practitioner and the patient (a) work to consolidate the skills learned in treatment; (b) work on relapse prevention; (c) review progress toward treatment goals; (d) and prepare for termination of the acute phase of treatment.

The authors stressed that beliefs related to addictions must be considered in conjunction with those pertaining to suicide and cognitive processes in the aforementioned cognitive case conceptualization and the selection of treatment strategies, and that relapse frequently results in increased distress and suicidal crises. Accordingly, substance use within the context of suicide risk must be addressed at the beginning of treatment sessions. Patients who have SUDs and are suicidal may either have transitory suicide ideation or have difficulty focusing on factors contributing to their suicidal state. They also emphasized the importance of patients' ability to proactively make positive changes in their lives and how critical that is to their motivation to continue treatment, collaborate in the treatment process, and generalize the strategies developed in treatment to their daily lives.

Britton and Connor (2010) conducted a secondary analysis of data from the Drug Abuse Treatment Outcomes Study (DATOS), a longitudinal multisite study of the effectiveness of community-based SUD treatment programs. They sought to determine the correlates of suicide attempts (SA) during the 12-month period following treatment for SUDs and to identify variables that were associated with SA. A group of 2,966 subjects who underwent short-term inpatient treatment and outpatient methadone treatment (OMT) showed a higher probability of SA than those enrolled in an outpatient drug-free program, indicating that hospitalization may not be the most effective approach for preventing SA. Results of the study suggest that regular and long-term contact available to clients in OMT and addressing the use of cocaine could be valuable in SA prevention. The study may have underestimated the prevalence of SA in the group because it was assessed on the basis of a single self-reported item.

The U.S. Army (2010) reported that nearly one-third of suicide deaths and more than 45 percent of suicide attempts among active duty Army personnel between 2003 and 2009 involved the use of alcohol or drugs (reviewed by Kuehn, 2010). In addition, the number of PTSD cases increased from 2,931 in 2004 to 10,137 in 2007, and the percentage of suicides among these soldiers diagnosed with PTSD increased from 4.6 percent in 2005 to 14.1 percent in 2009. Soldiers deployed in and returning from combat and veterans alike often have one or more co-occurring conditions that increase their risk of suicide. Recommendations include:

- Developing and applying protocols for screening for mental health issues co-occurring with PTSD and minor traumatic brain injury.
- Overcoming social and cultural disincentives for seeking treatment for mental problems;
- Enhancing SUD reporting and treatment referral.
- Characterizing the impact of increased abuse of licit and illicit psychotropic drugs.
- Determining which antidepressants can be used to treat anxiety and depression without increasing the risk of suicide.
- Increasing the level of primary care available to soldiers and veterans.
- Identifying and making available treatment for individuals at risk for suicide and other mental health and medical consequences of combat deployment.

Methodology

The methodology used in the development of TIP 50 was used in the preparation of this update (see http://www.kap.samhsa.gov/products/manuals/tips/pdf/TIP50_LitRev.pdf).

References

Britton, P. C., & Conner, K. R. (2010). Suicide attempts within 12 months of treatment for substance use disorders. *Suicide and Life-Threatening Behavior, 40,* 14–21.

Buri, C., Von Bonin, B., Strik, W., & Moggi, F. (2009). Predictors of attempted suicide among Swiss patients with alcohol-use disorders. *Journal of Studies on Alcohol and Drugs, 70,* 668–674.

Cacciola, J. S., Koppenhaver, J. M., Alterman, A. I., & McKay, J. R. (2009). Post-traumatic stress disorder and other psychopathology in substance abusing patients. *Drug and Alcohol Dependence, 101,* 27–33.

Conrad, A. K., Jacoby, A. M., Jobes, D. A., Lineberry, T. W., Shea, C. E., Ewing, T. D. et al. (2009). A psychometric investigation of the Suicide Status Form II with a psychiatric inpatient sample. *Suicide and Life-Threatening Behavior, 39,* 307–320.

Cougle, J. R., Keough, M. E., Riccardi, C. J., & Sachs-Ericsson. (2009). Anxiety disorders and suicidality in the National Comorbidity Survey-Replication. *Journal of Psychiatric Research, 43,* 825–829.

Darke, S., Torok, M., Kaye, S., & Ross, J. (2010). Attempted suicide, self-harm, and violent victimization among regular illicit drug users. *Suicide and Life-Threatening Behavior, 40,* 587–596.

Diefenbach, G. J., Woolley, S. B., & Goethe, J. W. (2009). The association between self-reported anxiety symptoms and suicidality. *The Journal of Nervous and Mental Disease, 197,* 92–97.

Glasner-Edwards, S., Mooney, L. J., Marinelli-Casey, P., Hillhouse, M., Ang, A. et al. (2010). Anxiety disorders among methamphetamine dependent adults: Association with post-treatment functioning. *American Journal of Addiction, 19,* 385–390.

Hendin, H., Al Jurdi, R. K., Houck, P. R., Hughes, S., & Turner, J. B. (2010). Role of intense affects in predicting short-term risk for suicidal behavior: A prospective study. *Journal of Nervous and Mental Disease, 198,* 220–225.

Hills, A. L., Afifi, T. O., Cox, B. J., Bienvenu, O. J., & Sareen, J. (2009). Externalizing psychopathology and risk for suicide attempt: Cross-sectional and longitudinal findings from the Baltimore Epidemiologic Catchment Area Study. *Journal of Nervous and Mental Disease, 197,* 293–297.

Ilecito, P., Pompili, M., Girardi, P., Lester, D., Vincenti, C., Rihmer, Z. et al. (2010). Hopelessness, temperament, and health perception in heroin addicts. *Journal of Addictive Diseases, 29,* 352–358.

Ilgen, M. A., Chermack, S. T., Murray, R., Walton, M. A., Barry, K. L., Wojnar, M. et al. (2009). The association between partner and non-partner aggression and suicidal ideation in patients seeking substance use disorder treatment. *Addictive Behaviors, 34,* 180–186.

Ilgen, M. A., Downing, K., Zivin, K., Hoggatt, K. J., Kim, H. M., Ganoczy, D. et al. (2009). Identifying subgroups of patients with depression who are at high risk for suicide. *Journal of Clinical Psychiatry, 70,* 1495–1500.

Ilgen, M. A., Bohnert, A. S. B., Ignacio, R. V., McCarthy, M. S., Valenstein, M. M., Kim, H. M. et al. (2010). Psychiatric diagnoses and risk of suicide in veterans. *Archives of General Psychiatry, 67,* 1152–1158.

Ilgen, M. A., Burnette, M. L., Conner, K. R., Czyz, E., Murray, R., & Chermack, S. (2010). The association between violence and lifetime suicidal thoughts and behaviors in individuals treated for substance use disorders. *Addictive Behaviors, 35,* 111–115.

Le Strat, Y., Ramoz, N., & Gorwood, P. (2010). In alcohol-dependent drinkers, what does the presence of nicotine dependence tell us about psychiatric and addictive disorders comorbidity? *Alcohol & Alcoholism, 45,* 167–172.

Leeies, M., Pagura, J. Sareen, J., and Bolton J. M. (2010). The use of alcohol and drugs to self-medicate symptoms of posttraumatic stress disorder. *Depression and Anxiety, 27,* 731–736.

Maloney, E., Degenhardt, L., Darke, S., & Nelson, E. C. (2009). Impulsivity and borderline personality as risk factors for suicide attempts among opioid-dependent individuals. *Psychiatry Research, 169,* 16–21.

Misson, H., Mathieu, F., Jollant, F., Yon, L., Guillame, S., Parmentier, C. et al. (2010). Factor analyses of the Suicidal Intent Scale (SIS) and the Risk-Rescue Rating Scale (RRRS): Toward the identification of homogeneous subgroups of suicidal behaviors. *Journal of Affective Disorders, 121,* 80–87.

Nepon, J., Belik, S. L., Bolton, J., & Sareen, J. (2010). The relationship between anxiety disorders and suicide attempts: Findings from the National Epidemiologic Survey on Alcohol and Related Conditions. *Depression and Anxiety, 27,* 791–798.

Niciu, M. J., Chan, G., Gelernter, J., Arias, A. J., Doulas, K., Weiss, R. et al. (2009). Subtypes of major depression in substance dependence. *Addiction, 104,* 1700–1709.

Nock, M. K., Hwang, I., Sampson, N. A. & Kessler, R. C. et al. (2010). Mental disorders, comorbidity and suicidal behavior: results from the National Comorbidity Survey Replication. *Molecular Psychiatry, 15,* 868–876.

Ries, R. K., Yuodelis-Flores, C., Roy-Byrne, P. P., Nilssen, O., & Russo, J. (2009). Addiction and suicidal behavior in acute psychiatric inpatients. *Comprehensive Psychiatry, 50*, 93–99.

Smith, J. P., & Book, S. W. (2010). Comorbidity of generalized anxiety disorder and alcohol use disorders among individuals seeking outpatient substance abuse treatment. *Addictive Behaviors, 35,* 42–45.

Sublette, M. E., Carballo, J. J., Moreno, C., Galfalvy, H. C., Brent, D. A., Birmaher, B., et al. (2009). Substance use disorders and suicide attempts in bipolar subtypes. *Journal of Psychiatric Research, 43,* 230–238.

U.S. Army. (2010). Army health promotion, risk reduction, and suicide prevention: Report 2010. Retrieved June 21, 2011, from http://usarmy.vo.llnwd.net/e1/HPRRSP/HP-RR-SPReport2010_v00.pdf

Wenzel, A., Brown, G. K., & Beck, A. T. (2009). Cognitive therapy for suicidal patients with substance dependence disorders. *Cognitive therapy for suicidal patients: Scientific and clinical applications.* (pp. 283–310). Washington, DC: American Psychological Association.