Chapter 6

SUICIDE RISK AMONG COLLEGE STUDENTS:
ASSESSMENT AND TREATMENT CONSIDERATIONS

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ABSTRACT

Suicide and suicidal ideation are a concern on college campuses. The prevalence data for suicidal thoughts and suicidal behavior among college students, and the associated risk factors are reviewed. Important components of a prevention and intervention program are addressed. An integrated, multifaceted approach that involves collaboration among important stakeholders, and incorporates the unique features of each university or college may be beneficial. Once at-risk students are identified, a comprehensive assessment can be conducted. A treatment plan can then be developed that targets the unique factors related to suicidal ideation and suicidal behavior for each student. It is recommended that multidisciplinary teams be utilized in all phases of program development, implementation, assessment, and treatment.

INTRODUCTION

Suicide in adolescents and young adulthood is a public health concern. Data from the Centers for Disease Control and Prevention rank intentional self-harm as the third leading cause of death among individuals between 15 and 24 years of age, after accidents and homicides (1).

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Among college students, suicide may be the second leading cause of death because the risk of homicide is markedly lower among this group relative to the general population (2, 3). Suicidal ideation is also a significant health concern because it can precede a suicide attempt (4).

Epidemiological data indicates that the rate of suicide among college students on campus is about 7.5/100,000, approximately one-half of the national suicide rate for a matched sample not attending college (5). However, this figure may underestimate the extent of the problem because off-campus suicides are difficult to identify (6) and the data excludes suicides committed by students who had been out of school for at least six months (7). Barrios et al. (8) discovered that 11.4% of US college students between 18 and 24 years of age seriously considered suicide and 7.9% made a suicide plan during the preceding 12 months. Furr et al. (9) surveyed over 1,400 college students at four colleges and universities and found that 53% experienced depression and 9% considered committing suicide since beginning college.

The American College Health Association conducted a survey including 26,685 students and reported 6.4% had seriously considered suicide and 1.3% had attempted suicide in the prior 12 months (10). Wilcox et al. (11) explored the prevalence and predictors of suicidal ideation and suicidal behavior prospectively over four years in a sample of over 1,000 college students. Sampling weights were used to produce weighted (wt) estimates that were representative of the general population of first-year college students. Twelve percent (wt) of the sample reported suicidal ideation at some time during the four years, and almost one-quarter of this group reported persistent suicidal ideation (11).

**Predictors, correlates, and risk factors of suicidal ideation and suicidal behavior**

Numerous risk factors for suicidal ideation and suicidal behavior in college students have been reported. There is some overlap from multiple studies, which suggest common risk factors. In a survey of 1,865 students at four large universities the reasons cited most often for attempting suicide included stress related to school, trouble with relationships, family problems, depression, hopelessness, anxiety, financial stress, and feelings of social isolation (12). Furr et al. (9) discovered that hopelessness (49%) was the most frequent contributing factor associated with suicidal ideation or suicidal behavior among college students who reported experiencing suicidal thoughts. In addition, loneliness (47%), helplessness (37%), relationship problems (26%), general undefined depression (26%), financial problems (26%), and parental problems (20%) were also cited (9). Konick and Gutierrez (13) tested a model of suicidal ideation in college students and found that hopelessness and depressive symptoms predicted suicidal thoughts.

Results from the National College Health Assessment Survey that was administered in the academic year 1999-2000 showed that the following experiences and situations were risk factors for seriously considering attempting suicide: being in an emotionally abusive relationship; not being heterosexual; attempted sexual penetration; sexual touching against one’s will; Asian background; perceived obesity; and frequent cigarette, alcohol, and amphetamine use (14). Wilcox et al. (11) found that low social support, childhood or adolescent exposure to domestic violence, maternal depression, and high self-reported
depressive symptoms were risk factors for persistent suicidal ideation over the course of four years of college. Similarly, individuals who experienced affective dysregulation, defined as the inability to regulate emotions appropriately and a susceptibility to negative mood states (15), were also found to be more likely to engage in suicidal behavior (16).

Another risk factor for suicidal ideation is involvement in risky behaviors. Barrios et al. (8) found that students who endorsed suicidal ideation were more likely to engage in a variety of risky behaviors than were students who did not consider suicide. For instance, students who endorsed suicidal ideation were more likely to drive after drinking alcohol, ride with a driver who had been drinking, rarely or never use seat belts, carry a weapon, engage in a physical fight, and boat or swim after drinking alcohol compared to their counterparts who did not endorse suicidal ideation (8). Substance use has also been associated with suicidal ideation and suicidal behavior (16-20). It has been speculated that the link between substance use and suicidal behavior is a direct effect, suggesting that the intoxicating effects of substance use might lead to impairments in judgment or changes in mood, which in turn increase the risk for suicidal ideation and suicide attempts (18).

A lack of self-forgiveness and forgiveness of others have also been proposed as risk factors for suicidal behavior. Hirsch et al. (21) investigated the connection between forgiveness, suicidal behavior, and depression. An inverse relationship between self-forgiveness and suicidal behavior was found. However, this relationship was fully mediated by depressive symptoms, such that greater self-forgiveness was associated with less depression, which in turn was associated with less suicidal behavior. Yet, low forgiveness of others was directly associated with suicidal behavior. The authors concluded that the ability to forgive others in interpersonal crises or critical events may help one cope with and move past such events. These findings suggest that self-forgiveness, through its association with depressive symptoms, and forgiveness of others may be appropriate targets for suicide prevention and intervention programs (21).

Risk factors for suicidal ideation may vary by gender and by race and ethnicity. Stephenson et al. (22) showed that depression and hopelessness in the previous year predicted suicidal ideation for male and female college students. Moreover, reports of being in a fight were related to suicidal ideation for both sexes. However, reports of sexual assault and alcohol consumption were predictors of suicidal ideation only for women, and reports of having been a victim of physical assault was a predictor of suicidal ideation only for men. De Luca et al (23) found that interpersonal conflicts were common risk factors for suicidal ideation for non-Hispanic White students and racial and ethnic minority students (this latter group included African Americans, Asian Americans, Hispanic Americans, and several students who classified their race and ethnicity as “other”). The authors also discovered that family and academic problems were common precipitating events for suicidal ideation for racial and ethnic minority students (23). Assessment of suicide risk must be tailored to the sex (22) and the race and ethnicity of the student.

In addition to these risk factors, college students face unique challenges that may produce distress and lead to suicidal thoughts and behaviors. These challenges include leaving the familiarity of home, transition from full dependence on caregivers to partial independence, academic pressure, and a change in social landscape (11, 16). For some students, attending college may take them away from traditional sources of support and place them in a new environment in which friends may be difficult to acquire. These challenges may intensify current psychological difficulties or create new ones, thereby increasing students’ risk of self-
harm (3). Furthermore, college students are entering a period of risk for psychological disorders that are linked with suicide, such as affective disorders, schizophrenia, and drug and alcohol use disorders, which may be enhanced by school-related stress (11). Moreover, as a result of the successful treatment of various mental illnesses and learning disorders prior to college, such as attention-deficit/hyperactivity disorder, along with improvements in accessibility arising from the Americans with Disabilities Act of 1990, more students with a psychiatric history are entering college (7). This group of students may be at increased risk for experiencing problems and not coping effectively with the demands of college life (24).

**ASSESSMENT, PREVENTION AND INTERVENTION**

A broad, comprehensive, and institution-based approach is necessary to reduce suicide and improve treatment utilization among college students. This approach must be multifaceted and include the cooperation of campus administrators; an effective screening protocol for psychological disorders associated with suicide; crisis management that includes walk-in hours at the university counseling center and staff members on call in the evenings and on weekends; mental health services to treat students who are suicidal, as well as students with mental illness prior to them becoming suicidal; the promotion of life skills development and stress reduction strategies; limiting access to lethal means of self-harm; social marketing that destigmatizes mental illness and removes barriers to treatment; the encouragement and facilitation of social interaction; and educational programs (2, 3). University-wide programs must be designed to meet the unique features of the student population and the needs of each campus (3), such as providing culturally sensitive prevention and intervention strategies. For instance, African American college students who report symptoms of depression, coupled with either difficulty acculturating to their environment or low ethnic identity, are at an increased risk of suicidal ideation (25). In addition, family and academic problems have been reported as common precipitants for suicidal ideation among ethnic and racial minority students (23). Moreover, the rate of suicidal behavior appears to be higher among gay, lesbian, and bisexual individuals than among heterosexual individuals (14, 26, 27). Understanding the risk factors related to suicidal thoughts and behavior among these groups is necessary for assessing risk and employing effective interventions.

Accurately identifying students at risk (11) and educating students about the common risk factors for suicide are two vital components of preventing suicide on campus. Guidance can be provided to faculty in rigorous academic areas about the signs of psychological distress and the process for making a referral, and workshops can be developed to strengthen students’ adaptive coping with academic demands (9). It is critical that university personnel at all levels be familiar with campus resources that are available to students in need.

Campus personnel who interact closely with students, such as residence hall advisors and academic advisors, can be educated about suicidal ideation and suicidal behavior, its known risk factors, means to identify troubled students, and effective treatments (7, 24). Tompkins and Witt (24) evaluated a program aimed at training resident advisors to recognize the warning signs of suicide, question those identified about suicidal intent, listen to concerns, and persuade those at risk to seek help. The authors utilized a quasi-experimental design in which resident advisors from three colleges who received training were compared to a group
of resident advisors from three colleges who were not trained. The program displayed some promise, as manifested in improvements in resident advisors’ appraisals of their efficacy, preparation, knowledge of resources, and likelihood of intervening among those who received training. There were also gains in some of these domains in the group who did not receive training, but the changes were less pronounced and less substantial than the changes in the experimental group. However, these cognitive changes were not accompanied by behavioral changes, such as inquiring about suicidal thoughts and assisting a student to seek help (24).

Researchers suggest that gatekeeper training may be beneficial in settings where trainees have low baseline knowledge of suicide prevention and gatekeeping responsibilities, whereas skills training may help those with high baseline knowledge translate that understanding into action (24, 28).

Unfortunately, it appears that only a fraction of troubled students are receiving needed intervention. Kisch et al. (14) found that a minority of students in their sample who reported suicidal ideation or attempts were receiving treatment. Similarly, Haas et al. (29) discovered that less than 10% of the students in their sample who were experiencing psychological distress were currently receiving psychotherapy. Westefeld et al. (12) found that only a minority of the college students in their study even knew of mental health resources. However, the results from a more recent web-based survey of over 8,000 undergraduate and graduate students from 15 universities found that of the students who experienced suicidal ideation in the past year (n = 543; 6.7%) 40.9% of respondents received therapy and 35.8% received medication, which may be indicative of a trend of increasing service use (30). Downs and Eisenberg (30) found that treatment utilization was positively associated with perceived need, beliefs about treatment effectiveness, and contact with others who have used treatment, and negatively correlated with the availability of trusting and warm relationships (30).

The limited number of students who receive treatment mandates that university personnel ensure that students are aware of campus mental health services and access them when needed. Information about mental health services can be provided at orientations for incoming students, posted in residence halls, and circulated through campus-wide electronic communication. The positive association between beliefs about the effectiveness of treatment and the use of therapy and medication suggests that health communication messages that focus on the effectiveness of treatment may improve attitudes about treatment use, and ultimately the use of treatment (30). It is also recommended that campus health personnel be mindful that help seeking among students with suicidal ideation is multidetermined and involves interpersonal and intrapersonal variables (30). Therefore, it is suggested that attempts to increase treatment utilization be multifaceted, tailored to the unique needs of each campus (30), and be flexible and modifiable as those needs change.

The American Foundation for Suicide Prevention created the College Screening Project that used electronic communication in their outreach approach to college students at risk for suicide (29, 31). Students at two universities were contacted via electronic communication and invited to complete a depression inventory and a questionnaire with items pertaining to previous suicide attempts, alcohol and drug use, eating behaviors, various affective states, degree of functional impairment, and current psychiatric treatment status. After completing the questionnaire, students were placed into three categories based on their degree of psychiatric risk, and received a personalized assessment from a counselor via email. Students in the two categories of highest risk were encouraged to contact a counselor to arrange an in-
person evaluation. All students were given the option of anonymously communicating with the counselor electronically (29).

Among the students who were designated as high or moderate risk, 19.4% attended an in-person evaluation and 13.5% entered treatment. Students who communicated electronically with the counselor were three times more likely to attend an in-person evaluation and enter treatment than students who did not communicate with the counselor. Approximately 80% of the students in the high-risk group who entered treatment previously had no contact with their school’s counseling center (29). The authors suggested that communicating electronically with the counselor prior to arranging an evaluation helped remove barriers to treatment, resolve students’ concerns, and facilitate the formation of a therapeutic relationship. Whereas the authors accurately pointed out that the absence of a control group prevents definitive conclusions from being made regarding the program’s effect on preventing suicide, this outreach program nonetheless demonstrates a novel means to contact students who are experiencing psychological distress who otherwise might not have been reached by conventional methods, and as such deserves further investigation (29).

Inquiring about the risk factors for suicide and suicidal ideation, in addition to directly asking students about suicidal thoughts and behavior, may enhance the identification of students at risk (19). It is recommended that healthcare professionals do not rely solely on the presence or absence of a mood disorder in assessing risk of self-harm and identifying students in need of further intervention. Instead, it is suggested that healthcare professionals inquire about suicide and suicidal ideation in all students who exhibit depressive symptoms, including students who exhibit subclinical levels of depression (32). Cukrowicz et al. (32) found that suicidal ideation is greatest at the highest level of depressive symptoms, but also occurs with mild and moderate symptoms of depression.

Although depressive symptoms are often present in students who have considered suicide or attempted suicide (11, 14, 19, 33, 34), these symptoms may not be present in every student who is at risk. For instance, Arria et al. (16) found that among individuals who reported suicidal ideation in their sample, less than one-half had high depressive symptoms. This finding suggests that campus health personnel may potentially miss a number of students who may have suicidal ideation if only depression screening tools are used to identify high-risk students (16).

Once students are identified and referred for treatment, a thorough assessment must be conducted. A comprehensive assessment includes an evaluation of the presence of the numerous risk factors that have been empirically linked to suicidal ideation and suicidal behavior. Factors to assess include the extent of social isolation, relationship functioning, hopelessness, academic functioning, financial difficulties, sexual victimization, family difficulties, and degree of affective dysregulation. Because students who experience suicidal ideation may be more likely to engage in risky behaviors than their counterparts who do not have thoughts of suicide, such as driving after drinking alcohol, carrying a weapon, and engaging in a physical fight (8), campus healthcare professionals are also encouraged to screen for the presence of suicidal ideation when risky behaviors are noted. A complete assessment also includes an evaluation for mental illnesses that have been associated with suicidal thoughts and behaviors, such as depression (11, 14, 19, 33, 34) and alcohol use disorders (16). A comprehensive assessment of suicide risk and screening for the presence of mental illnesses is a prerequisite for effective prevention and intervention.
Intervention consists of the development of a treatment plan that targets the unique triggers and risk factors for suicidal ideation and suicidal behavior for each student. Psychotherapy is often an important component of a treatment plan. The intensity of treatment will be determined by the degree of risk and functional impairment, and can range from periodic outpatient treatment sessions at the university counseling center to psychiatric hospitalization. If appropriate, brief psychotherapeutic interventions may be preferred over long-term treatment because some students may hope for and anticipate instant relief (9). In addition, action-oriented and problem solving approaches may promote students’ sense of empowerment (9).

The focus of treatment will vary based on the risk factors and associated psychiatric illnesses. For instance, for those students experiencing social isolation and loneliness a treatment objective may be to increase their sense of belonging. Freeman et al. (35) found that students’ sense of belonging at the university level was associated with their sense of social acceptance by other students and university personnel. Increasing students’ university-level belonging and social acceptance may decrease feelings of loneliness and isolation, which in turn may reduce emotional dysregulation and suicidal thoughts and behaviors.

Treatment can also focus on promoting the protective factors that diminish risk, such as improving connections to family members and the community, and promoting skills in problem solving and conflict resolution (36). Enhancing protective factors can promote resilience to stress and reduce the risk of a student’s future self-harm. Regardless of the precise focus of treatment, its importance for many troubled students cannot be underestimated. Empirical evidence has demonstrated the efficacy of psychological interventions for some of the conditions that are associated with suicidal behavior (e.g., depression, anxiety) (37), which underscores the importance of increasing students’ utilization of psychotherapy.

The University of Illinois developed an intervention that impacted the rate of suicide on its campus (38). This intervention consisted of a policy in which students who threatened or attempted suicide attended four sessions of professional assessment. The suicide rate during the first 21 years of the program decreased approximately 45% compared to the suicide rate prior to the program’s implementation (38). Such early identification and intervention is vital for students who experience suicidal ideation or threaten suicide, because some individuals who make a suicide attempt consider suicide prior to that attempt (4), and the history of a suicide attempt is related to an increased risk for additional attempts and successful suicide (14).

Pharmacotherapy in conjunction with behavioral interventions may be indicated for some students. University counseling centers can ensure that students have access to this service by having a psychiatrist on staff. Partnerships can be formed with the university’s psychiatry clinic or with medical providers in the community. If community resources are used, university personnel must make certain that the providers and services are able to meet the needs of their students (3).
CONCLUSION

Suicidal ideation and suicidal behavior are a concern on college campuses. A prevention and intervention approach that incorporates and integrates various members and agencies of the university and student population is needed (2, 3). Efforts must be made to make certain that the program considers the unique features and needs of each campus and student population (3). University staff and administrators are encouraged to work with university healthcare providers and student leaders to ensure that suicide prevention and timely intervention are a campus priority. Once students are identified, a multidisciplinary treatment team (12) can conduct assessments, identify the unique triggers for suicidal ideation and suicidal behavior for each student, and develop and implement an individualized treatment plan.

Additional research is needed to determine the effectiveness of comprehensive suicide prevention programs (3). Because there is a low base rate of completed suicides, studies must also include more frequently occurring outcome variables such as suicidal ideation and suicide attempts (7). Inclusion of these additional variables is essential because suicidal ideation can be a precursor to a suicide attempt (4), and the history of a suicide attempt is a risk factor for subsequent suicide attempts and successful suicide (14). In addition, research directed toward developing an epidemiology of suicide based on large-scale prospective studies is needed to broaden the understanding of risk and protective factors, which in turn can inform efforts to develop evidence-based prevention and intervention programs (39).

NOTE

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