Professional Psychology: Research and Practice
2009, Vol. 40, No. 3, 213–222

0735-7028/09/$12.00 DOI: 10.1037/a0014465

New Data on the Nature of Suicidal Crises in College Students: Shifting the Paradigm

David J. Drum, Chris Brownson, Adryon Burton Denmark, and Shanna E. Smith
University of Texas at Austin

This article presents new data on the nature of suicidal crises in college students. Data were collected from over 26,000 undergraduate and graduate students at 70 colleges and universities. An anonymous Web-based survey was designed to provide insight into the full spectrum of suicidal thought, intent, and action among college students. The authors discuss implications of these data and outline a new, problem-focused paradigm for conceptualizing the problem of college student suicidality and for guiding institutional policies and interventions at multiple points along the continuum of suicidal thoughts and behaviors. The proposed paradigm encompasses and expands on the current model of treating individuals in crisis in order to act preventively to reduce both prevalence and incidence of all forms of suicidality among college students.

Keywords: suicide, college students, suicidal ideation, campus suicide prevention

Supplemental materials: http://dx.doi.org/10.1037/a0014465.supp

National attention to the problem of college student suicide has been growing steadily over the past 25 years. However, recent high-profile suicide-related events on college campuses, and the ensuing media coverage of these events, have heightened concern for mental health issues and campus safety. Campus mental health professionals, along with administrators and policymakers, are increasingly preoccupied with the formidable task of not only decreasing suicide among the student population but also protecting their institutions from liability. Unfortunately, most campus counseling centers are facing an increasing demand for services with no corresponding increase in resources. However, one positive result of the increased attention to college student suicide is that federal legislation, such as the Garrett Lee Smith Memorial Act of 2004, is being passed to fund campus suicide prevention programs. It is also encouraging that recent attention to student safety has prompted administrators to initiate campus dialogues about student mental health issues. Unfortunately, lack of data on the nature of students' suicidal crises limits the effective implementation of available funds and inhibits dialogue from translating into action.

In the absence of guiding knowledge, college mental health practitioners have largely utilized the individual-focused paradigm of suicide prevention and intervention that is common in community settings. The success of this paradigm on college campuses rests on the ability to detect students at risk for suicide, effectively refer them to a professional, and have them meaningfully and actively participate in treatment. For a number of students, this treatment paradigm will be familiar, because many students have had suicidal urges and ideation that may have required intervention prior to attending college. Although the individual-focused paradigm helped these students survive the earlier suicidal crisis, they are once again on the suicidal pathway, and prior experience with suicidality may have habituated them to suicidal ideation and behaviors, thereby increasing future risk of completing suicide (Joiner et al., 2005). The current study suggests a need to go beyond exclusive reliance on this individual-focused model.

The individual-focused paradigm also fails to provide guidance for the development and implementation of effective institutional policies regarding students with mental health needs. Some colleges, seeking to protect themselves against lawsuits such as *Shin v. Massachusetts Institute of Technology* (2005), are adopting *forced leave* policies for students who admit to suicidal thoughts or behaviors. At best, such policies fail to improve treatment for students; at worst, they leave colleges and universities vulnerable

DAVID J. DRUM received his PhD in counseling psychology from the American University. He is a professor of educational psychology at the University of Texas at Austin. His research interests include college student suicide and integrated health care.

CHRIS BROWNSON received his PhD in counseling psychology from the University of Texas at Austin. He is director of the Counseling and Mental Health Center at the University of Texas and director of the National Research Consortium of Counseling Centers in Higher Education. His research and practice interests are in suicide prevention and primary care psychology.

ADRYON BURTON DENMARK received her BA in psychology from Stanford University and is currently a doctoral candidate in counseling psychology at the University of Texas at Austin. Her research interests include help-seeking behaviors and suicidality among college students.

SHANNA E. SMITH received her PhD in Human Development and Family Science at the University of Texas at Austin, with an emphasis on methodology and statistics. She manages the statistical consulting center at the University of Texas at Austin, where she focuses on the practical application of advanced statistical techniques.

CORRESPONDENCE CONCERNING THIS ARTICLE should be addressed to David J. Drum, University of Texas at Austin, Department of Educational Psychology, Counseling Psychology/Counselor Education Program, 1 University Station, D5800, Austin, TX 78712-0383. E-mail: ddrum@mail.utexas.edu

to lawsuits claiming discrimination against students with disabilities, such as *Nott v. George Washington University* (2005). It is possible that such policies also deter suicidal students from seeking help. Difficulties in developing appropriate institutional policies may be aggravated by the narrow scope of the individual-focused paradigm of campus suicide prevention, with its exclusive reliance on identifying and either treating or removing suicidal students.

Currently, attempts by mental health professionals to prevent suicides and to restore people to their premorbid condition are based largely on research that has examined the role of various factors in suicide attempts or completion. Because these are relatively low incidence events, it is both inappropriate to focus exclusively on factors associated with these outcomes and nearly impossible to draw meaningful conclusions about helping suicidal students (Haas, Hendin, & Mann, 2003; Silverman, 1993). Furthermore, the restricted scope of this research contributes to a disproportionate emphasis on assisting those who are in crisis rather than focusing efforts on preventing people from entering and progressing along a continuum of suicidality.

Episodes of suicidal thoughts and behaviors vary across many factors, including duration, intensity, frequency, associated mood states, consideration of methods, communication of distress, and help-seeking behaviors. This study provides an in-depth examination of the entire suicidal continuum, from passive suicidal thinking to multiple attempts. The knowledge thus generated illuminates a new paradigm for conceptualizing the problem of college student suicidality. Our proposed paradigm, which is described in detail in the discussion section of this article, is problem-focused in that it defines suicidality in the population as the problem to be addressed rather than focusing solely on suicidal individuals. Furthermore, the problem-focused paradigm both encompasses and expands on the current mode of treating individuals in crisis in order to decrease both prevalence and incidence of all forms of suicidality among college students.

Current Knowledge Regarding Campus Suicide

Suicide is the third leading cause of death for youths between the ages of 15 and 24 years, following accidental injury and homicide, and is believed to be the second leading cause of death for college students because of the low rate of homicide in this population (Centers for Disease Control and Prevention, 2007; Suicide Prevention Resource Center, 2004). Although the rate of completed suicides for college students is estimated at between 6.5 and 7.5 per 100,000, or approximately half that of the nonstudent matched cohort, nearly all of this reduction in suicide completions may be attributable to the reduced access to firearms on college campuses (Schwartz, 2006a; Silverman, Meyer, Sloane, Raffel, & Pratt, 1997). Additionally, the apparent decline in college suicide rates that has been noted over the past 3 decades (Schwartz, 2006b) correlates almost perfectly with the decreasing proportion of men in college, as the suicide completion rate for male students is over twice that of female students (Silverman et al., 1997). One might therefore conclude that campus prevention efforts are either nonexistent or ineffective, especially because nearly 80% of those students who die by suicide never participate in counseling services (Gallagher, 2004; Kisch, Leino, & Silverman, 2005). However, for those students who do receive help from their college counseling centers, these services are effective. An analysis of the prevalence and effect of known risk factors among counseling center clients suggests that these students would complete suicide at a rate 18 times greater than the general student suicide rate, when in fact the actual rate of suicide among counseling center clients is only 3 times greater than in the nonclient student population (Schwartz, 2006a).

Although the benefits of seeking counseling may be due, in part, to the self-selection of those who seek help, efforts to raise awareness about the mental health services available on campus remain important. This is particularly important considering that only 26% of college students are aware of their campus's mental health resources (Westefeld et al., 2005). Yet, even if it were possible to increase the sensitivity and accuracy of existing referral systems so that the majority of students at risk of committing suicide were seen at their college counseling centers, meeting the needs of these students would be extremely costly and could require up to a 75% increase in counseling staff (Schwartz, 2006a). An effective approach to suicide prevention cannot continue to rely entirely on individual-focused counseling services. Further reductions in suicide ideation, attempts, and completions must derive from a thorough understanding of all aspects of the suicidal spectrum and from use of that information to plan more robust programs of prevention and intervention.

The National Research Consortium Survey of College Student Suicidality

The National Research Consortium of Counseling Centers in Higher Education, founded in 1991, brings together counseling centers in the United States to study various college mental health topics. This collaboration allowed for the implementation of the current study, which is a large-scale survey designed to provide comprehensive information about college student mental health and to contribute uniquely to current knowledge of students' suicidal experiences. To meet these aims, we developed a Web-based survey with questionnaire items reviewed by the directors from each campus counseling center in the consortium, as well as by two experts in suicidology.

Sample Demographics

We selected a stratified random sample of 108,536 students across 70 participating U.S. colleges and universities, using a sampling strategy that allowed each campus to yield a sufficient number of students from its own population to allow for individual campus-level analyses. For campuses with more than 5,000 undergraduates, 1,000 were randomly selected; for those with enrollments between 500 and 4,999 undergraduates, 500 were randomly selected; for those with enrollments of fewer than 500 undergraduates, all students were selected. The same sample size guidelines were used to select graduate students. The undergraduate and graduate response rates were 24% (15,010 out of 62,000) and 25% (11,441 out of 46,536), respectively, for a total sample of 26,451 students.

Table 1 presents the demographic makeup of our sample, which is comparable to samples obtained by other large-scale national surveys of college health issues, such as the spring 2006 National College Health Assessment (American College Health Associa-

Table 1
Sample Demographics: Sex, Race, Sexual Orientation, and Age

Demographic	Undergraduates	Graduate students
Sex (%)		
Female	62	60
Male	38	40
Ethnicity (%)		
Caucasian/White	79	72
Asian American	6	4
Hispanic American/Latino/a	5	5
Multiracial	4	4
African American/Black	4	4
International/foreign student	2	11
Alaska Native/American Indian	<1	<1
Sexual orientation (%)		
Bisexual	2	2
Gay/lesbian	2	3
Heterosexual	95	94
Questioning	1	1
Mean age (years)	22	30

Note. For undergraduates, $n = 15{,}010$; for graduate students, $n = 11{,}441$.

tion, 2006) survey of almost 95,000 students. Because both our study and the National College Health Assessment included only 4-year colleges and universities, it is likely that both samples overrepresent White students compared with the broader population of students in higher education settings in the United States. In the current study, because students were randomly sampled within each participating school, it was critical to include a representative sample of schools. The size of the participating institutions ranged from 820 students to 58,156 students, with a mean of 17,752 students. Of the institutions in our sample, 38% were private and 62% were public, which is representative of the proportion of degrees awarded from public and private institutions nationwide (U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, 2004). Of the institutions, 94% included both graduate and undergraduate students, with only four campuses reporting entirely undergraduate student bodies. The institutions sampled represent geographic diversity, with 20% of the schools located in the Northeast, 20% in the West, 30% in the Midwest, and 30% in the South.

Lifetime Prevalence of Mental Health Concerns, Suicidal Ideation, and Attempts

To fully understand the context from which suicidality emerges, we considered it necessary to inquire about students' prior experiences with psychological help, psychotropic medication, and suicidal thoughts and behaviors. Among our sample, 44% of undergraduates and 49% of graduate students reported that they had sought mental health services at some point during their lives. Percentages of lifetime psychological service use among smaller samples of students have ranged from 35% to 42% (Deane & Todd, 1996; Kahn & Williams, 2003), suggesting that students in our sample were somewhat more likely to have used mental health services. In addition, 19% of undergraduates and 21% of graduate students in our study reported having received help from their campus counseling center at some point during their college career. Among our sample, 17% of undergraduates and 22% of graduate students reported having taken medication for mental health concerns at some point in their lives. These numbers may reflect a trend of increasing use of psychotropic prescriptions for children and adolescents, with the result that more students with persistent and often severe psychological problems may now be able to attend college (Benton, Robertson, Tseng, Newton, & Benton, 2003; Rudd, 2004). In fact, 92% of counseling center directors believe that students are increasingly arriving on college campuses already taking psychiatric medication (Gallagher, 2006).

One important finding from students' self-reports is that suicidal thinking is far more common than has been previously recognized. Over half of college students reported some form of suicidal thinking in their lives (see Table 2). When asked whether they had "ever seriously considered attempting suicide," 18% of undergraduates and 15% of graduate students endorsed this item. Among those who had seriously considered attempting suicide, 47% of undergraduates and 43% of graduate students had three or more periods of this serious ideation, suggesting that by the time students undergo suicidal crises in college, they are likely to have significant previous experience with suicidality. Additionally, 8% of undergraduates and 5% of graduate students reported having attempted suicide at least once during their lives. Given that the clearest and most consistent predictor for attempting or completing suicide is having made previous attempts (Joiner et al., 2005; Schwartz, 2006a), it is concerning that so many college students have already made one or more attempts. Our findings make it clear that suicidal ideation and attempts present a prevalent and recurrent problem for the nation's college students.

Suicidal Ideation Within the Past 12 Months

Querying students about whether they have seriously considered attempting suicide in the past 12 months is the most commonly used measure of college student suicidal ideation. Our findings show that 6% of undergraduates and 4% of graduate students reported that they "seriously considered attempting suicide" in the past 12 months (see Table 3). The National College Health As-

Table 2
Lifetime Experience of Suicidal Thoughts and Serious Suicidal Ideation

Which phrase best describes you?	Undergraduates (%)	Graduate students (%)
I have never had suicidal thoughts	45	49
One period in my life of having suicidal thoughts	24	22
A few discrete periods in my life of having suicidal thoughts	23	23
Repeated episodes of suicidal thoughts with periods in between of no suicidal thoughts	6	4
Suicidal thoughts on a regular basis for several years	2	2
I have seriously considered attempting suicide	18	15

Note. For undergraduates, $n = 15{,}010$; for graduate students, $n = 11{,}441$.

Table 3
Suicidality in the Past 12 Months

In the past 12 months . . .	Undergraduates (%)	Graduate students (%)
I thought, "I wish this all would just end"	37	30
I thought, "I wish I was dead"	11	8
I have seriously considered attempting suicide	6	4
I have attempted suicide	0.85	0.30

Note. For undergraduates, $n = 15{,}010$; for graduate students, $n = 11{,}441$.

sessment (American College Health Association, 2006) and the National College Health Risk Behavior Survey (Centers for Disease Control and Prevention, 1995) each found that approximately 10% of college students endorsed this same item. The difference in prevalence of suicidal ideation in the current study likely derives from the fact that our survey explored a continuum of suicidality rather than a single crisis point. When taking our survey, before students answered whether they had seriously considering suicide in the past 12 months, they responded to six prior items about their various experiences of suicidal thought, including items such as "I wish this all would just end" and "I wish I were dead." Answering multiple questions across several levels of severity prompted students to think deeply about their history of suicidality and provided them with the opportunity to precisely relate their experiences of suicidal thought. Individuals who experienced low levels of suicidal or presuicidal thinking were able to express this without endorsing a single item regarding serious suicidal ideation.

Suicide Preparations, Methods, and Attempts

Most clinicians know that when assessing suicide risk they should be more concerned for clients who report having a plan than for those who report having suicidal thoughts but no specific plan for attempting suicide. However, our results indicate that thoughts of attempting suicide rarely occur without accompanying thoughts about attempt methods. Among students who seriously contemplated suicide in the past 12 months, 92% of undergraduates and 90% of graduate students either considered some ways of killing themselves or had a specific plan (see Table 4). It may be that students are more likely to acknowledge having considered specific methods in an anonymous situation than when they are in the room with a counselor. The most common method considered by suicide ideators was a drug or alcohol overdose, which was the primary method considered by 51% of undergraduates and 37% of graduate students who had a specific plan. Further information about considered methods is available with the supplemental materials.

Among those who seriously considered suicide in the past 12 months, 37% of undergraduates and 28% of graduate students made some preparations for killing themselves, such as gathering materials, writing a suicide note, doing a practice run, or beginning an attempt and then changing their mind (see Table 4). To assess the extent to which preparatory activities predict suicide attempts, we performed a hierarchical linear model, an extension of multiple regression that can appropriately handle the sampling framework and noncontinuous outcomes used in this study. The hierarchical linear model containing gender, student status, and each of the four preparatory activities revealed that both gathering material for an attempt, odds ratio (OR) = 2.57, $t(1243) = 4.13$, $p < .001$, and beginning the attempt but changing one's mind, $OR = 17.67$, $t(1243) = 14.06$, $p < .001$, significantly increased the odds of making a suicide attempt. Ultimately, 14% of undergraduates and 8% of graduate students who seriously considered suicide in the past 12 months actually attempted suicide. These numbers represent 0.85% of our total undergraduate sample and 0.30% of our total graduate student sample. The majority of these attempters (69% of undergraduates and 75% of graduate students) made only one attempt, with only 9% of undergraduate and graduate student attempters reporting three or more attempts.

Among those who attempted suicide, 19% of undergraduates and 28% of graduate students made an attempt that required medical attention. The most common attempt method was a drug overdose, which was used by 51% of undergraduate and 50% of graduate student attempters. Additional information about methods used is available online with the supplemental materials. Perhaps the most distressing finding was that 23% of undergraduates and 27% of graduate students who attempted suicide within the past 12 months reported that they were currently considering making another suicide attempt. These results again underscore the highly recurrent nature of this problem, which demands an expanded intervention approach, both to prevent students from originally entering the repeating cycle of suicidality and to more effectively prevent relapse.

Characteristics of Serious Suicidal Ideation

Although there is great value in accurately describing the prevalence of serious suicidal ideation and attempts, we were most interested in gaining unique insight into the subjective experience of being suicidal. We believe that enriched understanding of this experience holds many keys, both for defining a new and more useful paradigm for comprehensive suicide prevention, and for enhancing clinicians' knowledge of and treatment approaches to helping suicidal clients. We therefore queried students regarding

Table 4
Suicidal Plans and Preparations

Answered by those who have seriously considered attempting suicide in past 12 months	Undergraduates (%)	Graduate students (%)
Plans		
Never considered how to attempt	8	10
Thought about some ways, but not seriously	54	55
Had a specific plan	38	35
Preparations		
Gathered material to kill self	19	15
Began to attempt, then reconsidered	17	10
Wrote suicide note	14	7
Did practice run of suicide attempt	5	4

Note. For undergraduates, $n = 910$; for graduate students, $n = 411$.

features of their periods of suicidal thinking, such as frequency, intensity, and duration.

The majority of students who seriously considered suicide in the past 12 months experienced these suicidal thoughts as recurrent, brief, and intense events. In our sample, 69% of undergraduates and 63% of graduate students reported having more than one period in the past 12 months during which they considered attempting suicide. This suggests that serious suicidal ideation is experienced recurrently even within a relatively short span of time. Surprisingly, 56% of undergraduates and 58% of graduate students reported that, on average, their periods of serious suicidal ideation lasted for 1 day or less. Only 16% of both undergraduates and graduate students had periods of seriously considering a suicide attempt for many weeks or more (see Table 5). Despite the relative brevity of many of these periods of suicidal thought, 50% of undergraduates and 45% of graduate students reported that their thoughts of attempting were strong or very strong, and 45% of undergraduates and 39% of graduate students reported that their thoughts of suicide greatly interfered with their academic performance.

Clinicians who work with suicidal clients benefit from a heightened awareness of common patterns of ideation, such as brief but intense periods of serious suicidal thinking. These findings also have implications for the traditional model of campus suicide prevention, which depends on training faculty and staff to look for behavioral warning signs of suicidal ideation. If, for over half of suicidal students, a typical period of suicidal thinking lasts less than 1 day, it is improbable that a referral agent would have the opportunity to recognize a student in crisis. Also, if the student were identified, in many cases the suicidal ideation would have passed by the time he or she could seek mental health treatment.

Contributing Factors and Associated Mood States

Another unique aspect of this survey was the ability to query students about their perception of the impact of various experiences on their suicidal thoughts in the past 12 months. For both undergraduate and graduate students, the three factors rated by most students as having a large or very large contribution to their ideation were wanting relief from emotional or physical pain, problems with romantic relationships, and the desire to end one's life (see Table 6). An important implication of these findings is that the incidence of suicidal ideation may be greatly reduced by a population-oriented preventive approach that seeks to improve social support networks and engineer a more connected, caring environment. Problems with academics, problems with friends, and family problems were also commonly rated as having a large impact. In particular, university administrators should note that academic problems were rated as having a large effect on suicidal ideation by 43% of undergraduates and 45% of graduate students who seriously considered attempting suicide. This suggests that the systems that become involved with academically distressed students may have an opportunity to interact with these students in a way that is sensitive to and may decrease their likelihood of developing suicidal thinking.

Clinicians working with suicidal students should be conscious of the potential impact of occurrences such as breakups and academic struggles. These issues are relatively common among counseling center clients and yet should not be treated lightly. It should also be noted that less common events, such as interpersonal violence or drug and alcohol problems, might nonetheless contribute profoundly to the development of suicidal ideation. Population-based interventions aimed at decreasing the occurrence of these associated factors may effectively reduce the incidence of suicidal ideation among college students.

Students were also asked about their emotional experiences during their periods of suicidal ideation. Not surprisingly, sadness, loneliness, and hopelessness were the most frequently endorsed moods during students' typical periods of suicidal ideation. When looking at all of the emotions together as predictors of placement on the suicidal continuum, some interesting trends emerge. Hierarchical linear models including the emotions anger, anxiety, sadness, guilt, loneliness, and hopelessness/helplessness were used to predict typical length of ideation, strength of suicidal intent, and whether the person attempted suicide. Those who felt hopeless/helpless, $b = 0.22$, $t(1182) = 6.37$, $p < .001$; angry, $b = 0.07$, $t(1182) = 3.48$, $p < .001$; or sad, $b = 0.08$, $t(1182) = 2.29$, $p < .05$; had stronger suicidal intent. However, only a sense of hopelessness/helplessness predicted longer periods of ideation, $OR = 1.26$, $t(1183) = -4.27$, $p < .001$, and greater likelihood of making a suicide attempt, $OR = 1.44$, $t(1194) = 3.21$, $p < .01$.

These findings underscore the complex nature of suicide risk assessment. Feelings of hopelessness/helplessness are associated with increased risk for attempting suicide, but these feelings may be difficult for referral agents to identify. Even highly trained professionals have difficulty accurately assessing the severity of suicide risk in their clients (Bryan & Rudd, 2006). Wingate, Joiner, Walker, Rudd, and Jobes (2004) found that clinicians tend to both overestimate the severity of clients' suicidal thoughts and underestimate the severity of risk that is associated with preparing for a suicide attempt. If trained professionals have difficulty accurately assessing suicide risk, then it follows that the laypeople central to campus gatekeeper training efforts will struggle.

Table 5
Frequency and Duration of Suicidal Ideation Within the Past 12 Months

Answered by those who have seriously considered attempting suicide in past 12 months	Undergraduates (%)	Graduate students (%)
No. of periods (in the past 12 months) of suicidal ideation[a]		
1	31	37
2	26	25
3	16	12
4–6	14	12
7 or more	11	10
Average length of these periods of suicidal ideation		
1 hr or less	31	32
Several hours/day–1 day	25	26
Many days–1 week	28	26
Many weeks–1 month	11	11
Many months or more	5	5

Note. For undergraduates, $n = 910$; for graduate students, $n = 411$.
[a] Response error accounted for 2% of undergraduate and 4% of graduate student responses.

Table 6
Events Rated as Having a Large Impact on Seriously Considering Suicide in the Past 12 Months

Answered by those who had seriously considered attempting suicide in past 12 months	Undergraduates (%)	Graduate students (%)
Emotional/physical pain	65	65
Romantic relationship problems	59	53
Impact of wanting to end my life	49	47
School problems	43	45
Friend problems	43	28
Family problems	42	34
Financial problems	31	34
Showing others the extent of my pain	30	27
Punishing others	14	8
Alcohol/drug problems	10	6
Sexual assault	8	6
Relationship violence	6	6

Note. For undergraduates, $n = 910$; for graduate students, $n = 411$.

Communicating Distress, Help Seeking, and Protective Factors

Many campus suicide prevention efforts focus on gatekeeper training, such as the popular Question, Persuade, and Refer program, which has shown promise in improving the ability of those with frequent student contact to notice warning signs and respond appropriately to students who exhibit emotional distress and may be contemplating suicide (Wyman et al., 2008). To better understand student patterns of informal help seeking, we asked students who seriously considered attempting suicide in the past 12 months if they told anyone about their suicidal thoughts. We found that 46% of undergraduate and 47% graduate students chose not to tell anyone about their suicidal thoughts. Of interest, after controlling for student status, gender, and intensity of suicidal thought, a hierarchical linear model found no relationship between disclosing suicidal ideation and actually making an attempt. However, 52% of students who confided in other people reported that telling the first person was helpful or very helpful in dealing with the suicidal thoughts. Two thirds of those who disclosed their suicidal ideation first chose to tell a peer, such as a romantic partner, roommate, or friend. Further information about choice of confidant is available online with the supplemental materials. Almost no undergraduates and not a single graduate student confided in a professor. Therefore, for gatekeeper training efforts to be more effective, they need to focus on training students in how to respond to their peers. Although it is logistically more difficult to train students, who may be unlikely to voluntarily engage in a training process, it is likely a more efficient use of limited resources from a population-based perspective. Not only are students more likely to be chosen as confidants by peers who experience suicidal ideation, but they also stand to benefit personally from the increased awareness of mental health issues that will be facilitated through training, thus resulting in a deeper and more enduring impact on campus suicide prevention.

Students' reasons for not telling others about their suicidal ideation provide valuable insight into the way students perceive both the seriousness of their suicidal thoughts and the potential consequences of sharing these thoughts with others. Several prominent themes that emerged from this inquiry were fear of being stigmatized or judged, not wanting to burden others, knowledge that the problem was transitory, not having anyone to tell, and fear of consequences such as expulsion from school or forced hospitalization. It is important for university policymakers to note that wariness of institutional policies like mandatory treatment or medical leave prevents some students from disclosing their distress. These results also have implications for population-based interventions aimed at decreasing secrecy and stigma around mental health issues and increasing students' social support networks. Such interventions are likely to both reduce the chance that students will initially develop suicidal ideation and increase the probability that those students who do experience suicidal ideation will confide in others.

Among students who disclosed their suicidal ideation to others, only 58% of undergraduates and 50% of graduate students were advised by the first person they told to seek professional help. A hierarchical linear model revealed that a student is more likely to be advised to seek help for suicidal thoughts if the student is female, $OR = 1.40$, $t(546) = 1.99$, $p < .05$; if the suicidal thoughts are stronger, $OR = 1.34$, $t(546) = 2.66$, $p < .01$; if the thoughts create greater interference with academics, $OR = 1.20$, $t(546) = 2.81$, $p < .01$; or if the student first confides in a family member, $OR = 1.81$, $t(546) = 2.48$, $p < .01$. Surprisingly, those with stronger intent to kill themselves were marginally less likely to be advised to seek professional help, $OR = 0.84$, $t(546) = -1.69$, $p = .09$. This finding is alarming, because self-reported intent to kill oneself is highly correlated with actually attempting suicide. The disconnect between the student's intent to commit suicide and the confidant's perception of the seriousness of the situation may result from the greater detachment that accompanies serious intent to kill oneself. It may also indicate a tendency to conceal the intensity of distress to minimize the likelihood that others would interfere with a suicide attempt.

Regardless of the precise reasons for the mismatch between suicidal intent and likelihood of being advised to seek psychological services, this disconnect has clear implications for the utility of the individual-focused paradigm of campus suicide prevention. Our results indicate that those most likely to serve as referral agents are less likely to refer higher risk students to treatment. Increasing the precision of referrals would require considerable investment of resources, because laypeople would need to be trained to the level of paraprofessionals. An important supplementary use of resources would be to create a more connected and caring campus environment so that fewer students initially enter the suicidal process.

In addition to understanding students' patterns of communicating distress, we hoped to learn how suicidal students experience the process of seeking professional help. Less than half of students who seriously considered attempting suicide received any professional help, and about one third of those who reported receiving psychological services were already receiving such services before the onset of their suicidal ideation. Further details about students' timelines for seeking help are available online with the supplemental materials. A hierarchical linear model showed that graduate students, $OR = 1.38$, $t(1263) = 2.77$, $p < .01$; female students, $OR = 1.44$, $t(1263) = 3.51$, $p < .001$; those with more intense thoughts, $OR = 1.33$, $t(1263) = 3.78$, $p < .001$; and those whose thoughts had a greater impact on their academic performance, $OR =$

1.05, $t(1263) = 2.26$, $p < .05$; were significantly more likely to seek professional help. Over two thirds of students who sought help saw counselors, and over one third of students saw psychiatrists, with some students receiving help from multiple sources. Among students who saw counselors, 53% of undergraduates and 60% of graduate students rated the counselor as helpful or very helpful in preventing suicide. Among students who saw a psychiatrist, 39% of undergraduates and 44% of graduate students rated that person as helpful or very helpful. These helpfulness ratings were nearly identical for other medical providers. After controlling for gender, student status, strength of suicidal thoughts, and strength of intent to kill oneself, students who sought professional help were less likely to attempt suicide, $OR = 0.58$, $t(1242) = -3.20$, $p < .01$, than those who did not seek help.

We asked students who seriously considered attempting suicide but did not ultimately make an attempt within the past 12 months to rate the importance of various factors in preventing a suicide attempt. Among both undergraduate and graduate students 77% said that disappointing or hurting their family had a large or very large impact on their decision to not attempt suicide, whereas 56% and 49%, respectively, said the same of disappointing or hurting their friends (see Table 7). Knowledge of protective factors may assist clinicians who are working to reduce a client's risk for attempting suicide. In addition, 40% of undergraduates and 35% of graduate students reported that wanting to finish school was an important reason for not attempting suicide, implying that judicial or involuntary withdrawal procedures for suicidal students may remove an important protective factor.

Prior research suggests that aspects of campus life that increase students' sense of belonging to a caring social network, such as sports participation, are associated with decreased suicidal behavior (Brown & Blanton, 2002). After controlling for gender and student status, we found that students who participated as either leaders, $OR = 0.71$, $t(25854) = -5.16$, $p < .001$, or members, $OR = 0.75$, $t(25854) = -3.84$, $p < .001$, of student organizations were less likely than those who did not participate in organizations to have seriously considered attempting suicide in the past 12 months. These results underscore the importance of creating and maintaining an inclusive campus environment and providing opportunities for students to connect to others as a possible means for decreasing the numbers of students who enter the suicide continuum.

Table 7
Important Factors in Preventing a Suicide Attempt

Answered by ideators who had not attempted suicide in the past 12 months	Undergraduates (%)	Graduate students (%)
Disappointing/hurting my family	77	77
Disappointing/hurting my friends	56	49
Hope/plans for the future	42	35
Wanting to finish school	39	32
Support of my friends	38	28
Support of my family	35	33
Disappointing/hurting my partner	34	46
Religious/moral beliefs	34	33
Support of my partner	26	28
My pet(s)	19	20
Relationship with mental health professional	10	14

Note. For undergraduates, $n = 761$; for graduate students, $n = 370$.

Implications for Developing a Problem-Centered Paradigm

This study has contributed to the understanding of college student suicide in several important ways. First, it provides a view into the mind of suicidal individuals, from initial thoughts of suicide through multiple attempts. Second, it shows that suicidal ideation can be a recurrent phenomenon: Those who have one episode of suicidal ideation or urge are reasonably likely to have more. Third, it suggests that periods of suicidal ideation for some people are quite brief, yet ideation seldom occurs in the absence of some form of contemplation or planning for how one would act on the suicidal urge. Fourth, it manifests the profile of a spectrum of suicidality in a large population of college students as clusters of ideation, contemplation, and planning as well as attempts, multiple attempts, and completions. Fifth, it highlights some limitations of the prevailing individual-focused paradigm for suicide prevention and intervention.

Our study does not discredit the prevailing paradigm; in fact, it fortifies the knowledge needed to increase the success of interventions characteristic of this paradigm. For example, clinicians are likely to benefit from an enhanced understanding of the variable risk associated with different subjective emotional states, common patterns of ideation, students' perceptions of the impact of various risk-conferring and protective factors, and students' experiences of seeking professional help. Increasing the efficacy of crisis interventions through this new knowledge is particularly beneficial to the private practitioner whose responsibility is to the patient accepted into treatment and not to the health status of a larger community. These interventions are also appropriate to the college mental health practitioner when treating a client in suicidal crisis. However, college campuses have the additional responsibility of not only protecting the student in suicidal crisis, but also considering the public health goals of reducing the incidence of suicidality and enhancing the health and well-being of the larger population of students.

A difficulty of the prevailing paradigm is that it blinds and binds. To use the well-worn analogy of an iceberg, it blinds college mental health practitioners' vision to the submerged behaviors that are part of a spectrum of expression of suicidality and culminate in the crises that lead to eventual death by suicide (Joiner et al., 2005). Our contention is that when suicidality is viewed from the perspective of a population of individuals, there is a discernable profile of experience and expression of symptoms of suicidality in that population. Those symptoms can then be ordered into a progression reflecting increasing intensity of suicidality. Ideally, to maximize the opportunity to reduce incidence and prevalence of suicidality, each symptom cluster would be examined to identify factors contributing to elaboration of the symptom. Once contributing factors are known, then interventions precisely tailored to that factor can be applied.

The individual-focused paradigm, rather than suffusing intervention efforts to the entire spectrum of symptoms and their related contributing factors, is place specific on the spectrum; that is, it microfocuses on the individual in crisis. In doing so, this paradigm binds intervention behavior to that single point on the

profile and contributes to college mental health practitioners' failure to capitalize on countless opportunities both to prevent development of the symptom and to reduce forces routinely contributing to life-threatening intensification of suicidal intent. The result is an overallocation of resources to crisis intervention efforts at the expense of other forms of intervention. Additionally, by focusing solely on the individual in crisis, the current paradigm obscures the reality of how common a phenomenon it is for students both prior to and during the college years to engage in one or several behaviors considered part of a continuum of suicidality, which, with repeat episodes, contributes to lowering the threshold for acting on suicidal urge.

To enable the problem of college student suicidality to be seen and addressed in its fullness, it is necessary to step back from microfocusing on just those students experiencing a suicidal crisis to see and address the entire spectrum of suicide-related thoughts and expression. Practitioners must do the equivalent of raising the suicide iceberg to reveal its submerged elements, magnitude, and internal dynamics, and they must learn how the milieu in which this iceberg developed has shaped and influenced its features. The knowledge gleaned from this more complete view of suicidality in college students must be matched with a more complete intervention paradigm. Such a paradigm must capitalize on the strengths of the current model but must also encase it in a broader framework capable of reducing the incidence of suicidality by preventing occurrences of its most mild and often transient manifestations all the way through posttreatment interventions to reduce relapse through recovery strengthening programs. Our proposed problem-focused paradigm incorporates some of the concepts and interventions espoused by community psychologists as well as by public health specialists engaged in primary prevention.

A problem-focused paradigm requires the entire campus community to share responsibility for reducing student suicidality. Rather than focusing on the suicidal student as the institution's problem, the new paradigm defines the problem as how to reduce suicidality in all its forms of expression among the entire population of students. This shared campus responsibility broadens the personnel and resources available to reduce the percentage of students in a given institution who engage in suicidal thinking, contemplating how to attempt suicide, writing suicide notes, doing practice runs, attempting suicide, engaging in multiple attempts, and relapsing postrecovery. The problem-focused paradigm calls for the activation of a cadre of stakeholders (administrators, student leaders, advisors, faculty, parents, counselors, student affairs specialists, and other relevant constituencies) to engage in problem-solving activities. Furthermore, it illustrates how the current intervention focus must be diffused to include primary prevention, proactive assistance, early intervention, and recovery maintenance programs and how it must continue to improve the effectiveness of helping students resolve their suicidal crises.

Primary prevention efforts, which are designed to precede the origination of an observable need, can be understood as having four main foci: (a) to refashion the environment so that it is both more supportive and more protective, (b) to increase awareness and promote help seeking through the dissemination of educational materials and self-assessments, (c) to reduce the incidence of traumatic negative life events, and (d) to increase the available sources of internal resilience among the population. For example, academic programs such as living-learning environments and freshman interest groups foster the development of supportive relationships. Web-based mental health screeners may engage students in thinking about their personal distress levels and ways of coping, whereas information and advocacy campaigns can raise awareness and reduce the frequency of highly damaging interpersonal events, such as sexual assault and relationship violence, in the lives of college students. Furthermore, the protective benefits of campus prohibitions against firearms suggest that other methods of environmental engineering, such as restricting access to campus rooftops and securing potentially lethal laboratory chemicals, will save the lives of many unidentified individuals.

The rationale behind this population-level focus is that the same expenditure of resources results in greater improvements in health status than the exclusive targeting of at-risk individuals. Frohlich and Potvin (1999) explained,

> when many people lower their risk, even a little, the total benefit for the population is larger than if few people at high risk experience a large risk reduction. This is consistent with the notion that groups of individuals function collectively and, as such, are affected by the average functioning of the individuals around them. (pp. 213–214)

By shifting the entire distribution of individuals to a lower risk level, not only are those at high risk being shifted to a lower risk status, but the overall prevalence of suicidality in the population is also decreasing and the overall population health is increasing.

The potential benefits of preventive policies are clear, but enacting such policies will require universities to reevaluate many existing beliefs that contribute to a dual-role conflict regarding students with emotional or behavioral problems. Institutional attitudes and policies may promote detachment from those students who struggle academically or express extreme emotional distress. To increase the health and well-being of the student population, it is necessary to enhance the supportive aspects of the university environment so that the institution engages with, rather than detaches from, students in distress, thereby communicating to all students a message of connection and caring. This type of supportive and inclusive campus community is a beneficial end in itself and will fortify the resilience and coping of its members through reducing isolation and enhancing social support.

Following prevention on the continuum of need and response are early interventions, for which the focus shifts from the entire student population to an identified subpopulation with elevated known risk factors. The majority of individuals in these subpopulations will not be on the extreme end of the distress spectrum indicating a suicidal crisis but may be experiencing less severe suicidal thoughts or may simply be at increased risk for entering the suicidal continuum. Early interventions include treatment modalities such as group and workshop formats, as well as the use of Web-based interventions. For example, the American Foundation for Suicide Prevention's College Screening Project invites students by email to participate in anonymous online screenings, with follow-up contact and encouragement to seek treatment if a certain level of distress is indicated (Haas, Hendin, & Mann, 2003). Other early interventions include the creation of support and therapy groups for students who are experiencing problems with romantic relationships, family and friends, or academics. The purpose of such interventions is to boost recovery from negative life events that correlate highly with suicidality and thereby to proactively counteract the worsening of suicidal thoughts among these groups.

The next phase of treatment along the temporal continuum, that of treating the individual in a state of suicidal crisis, needs no explanation because it is currently the ubiquitous mode of dealing with college student suicidality and has been elaborated on at length elsewhere in this article. This phase of treatment, which if used alone will do little to decrease the incidence of suicidality among college students, is nonetheless necessary to protect those who have reached the extreme end of the suicidal continuum, that of intense crisis or suicide attempt. This individual-focused form of intervention can also benefit from the shift in institutional attitudes and increased environmental support advocated previously. Currently, the dual-role conflict that establishes the university as the adversary of the suicidal student appears to discourage many students from seeking the help they need because of fears of academic consequences. By changing the university's perception of the suicidal student as a problem for campus mental health services to deal with and by reframing this perception to focus on suicidality as the problem to be shared among all members of the university, institutions can continue to engage with rather than detach from students in distress.

According to the current paradigm, if the individual treatment phase is deemed successful, then the student is released from treatment, typically into the same environment in which the suicidal crisis originally emerged. The problem-focused paradigm recognizes that suicide is a highly relapsing condition akin to substance abuse, depression, eating disorders, and a variety of states that fuel detachment from oneself. Simply treating and resolving the current crisis does not necessarily reduce future occurrences, and these individuals are placed at increased risk of eventually completing suicide by virtue of having entered the suicidal continuum. A final phase of treatment focused on relapse prevention is needed and may include the use of support groups that incorporate coping and problem-solving skills and mindfulness-based practices. Relapse prevention may also consist of programs such as disease management or recovery support centers, many of which are currently aimed at reducing relapse for substance abuse but may be expanded to include other highly recurrent conditions, including suicidality. The inclusion of this final relapse-prevention phase of treatment is crucial for achieving the goal of reducing both the incidence and prevalence of student suicidality.

In summary, colleges and universities face increasing pressure to prevent college student suicide in the context of growing levels of distress among the student body and diminishing resources with which to treat that distress. A comprehensive approach to suicide prevention can come about only through a fundamental shift in the paradigm for conceptualizing suicidality. The problem-centered approach that we advocate here calls for the entire administrative structure of the university to become engaged with the problem of suicidality and to implement policies and programs to reduce suicide by intervening at all points along the suicidal continuum, from prevention through early intervention, crisis treatment, and relapse prevention. Furthermore, expanding the campus dialogue around issues of suicide to include all stakeholders will help involve a greater cross-section of campus personnel and will add valuable perspectives while facilitating program development, implementation and planning. Finally, it is apparent that all clinicians, regardless of whether they serve a college student population, will benefit from greater understanding of the entire range of suicidal thoughts and behaviors that precede the crisis points that are so often the focus of treatment. This knowledge will contribute to more targeted risk assessments and treatment approaches. Further research is needed to both inform the effective implementation of these interventions and to develop and test new approaches.

References

American College Health Association. (2006). *American College Health Association—National College Health Assessment: Reference group data report spring 2006.* Baltimore: Author.

Benton, S. A., Robertson, J. M., Tseng, W., Newton, F. B., & Benton, S. L. (2003). Changes in counseling center client problems across 13 years. *Professional Psychology: Research and Practice, 34,* 66–72.

Brown, D. R., & Blanton, C. J. (2002). Physical activity, sports participation, and suicidal behavior among college students. *Medicine and Science in Sports and Exercise, 34,* 1087–1096.

Bryan, C. J., & Rudd, D. M. (2006). Advances in the assessment of suicide risk. *Journal of Clinical Psychology, 62,* 185–200.

Centers for Disease Control and Prevention. (1995). Youth risk behavior surveillance: National College Health Risk Behavior Survey. *MMWR Surveillance Summaries, 46*(SS-6), 1–54. Retrieved September 15, 2007, from http://www.cdc.gov/mmwr/preview/mmwrhtml/00049859.htm

Centers for Disease Control and Prevention. (2007). *Suicide prevention: Youth suicide.* Retrieved January 14, 2008, from http://www.cdc.gov/ncipc/dvp/Suicide/youthsuicide.htm

Deane, F. P., & Todd, D. M. (1996). Attitudes and intentions to seek professional psychological help for personal problems or suicidal thinking. *Journal of College Student Psychotherapy, 10*(4), 45–59.

Frohlich, K. L., & Potvin, L. (1999). Health promotion through the lens of population health: Toward a salutogenic setting. *Critical Public Health, 9,* 211–222.

Gallagher, R. P. (2004). *National Survey of Counseling Center Directors.* Arlington, VA: International Association of Counseling Services.

Gallagher, R. P. (2006). *National Survey of Counseling Center Directors.* Arlington, VA: International Association of Counseling Services.

Garrett Lee Smith Memorial Act of 2004, Pub. L. No. 108–355, 118 Stat. 1404 (2004).

Haas, A. P., Hendin, H., & Mann, J. J. (2003). Suicide in college students. *American Behavioral Scientist, 46,* 1224–1240.

Joiner, T. E., Conwell, Y., Fitzpatrick, K. K., Witte, T. K., Schmidt, N. B., Berlim, M. T., et al. (2005). Four studies on how past and current suicidality relate even when "everything but the kitchen sink" is covaried. *Journal of Abnormal Psychology, 114,* 291–303.

Kahn, J. H., & Williams, M. N. (2003). The impact of prior counseling on predictors of college counseling center use. *Journal of College Counseling, 6,* 144–154.

Kisch, J., Leino, E. V., & Silverman, M. M. (2005). Aspects of suicidal behavior, depression and treatment in college students: Results from the spring 2000 National College Health Assessment Survey. *Suicide and Life-Threatening Behavior, 35,* 3–13.

Nott v. George Washington University, No. 05–8503 (D.C. Super. Ct. Oct. 25, 2005).

Rudd, D. M. (2004). University counseling centers: Looking more and more like community clinics. *Professional Psychology: Research and Practice, 35,* 316–317.

Schwartz, A. J. (2006a). College student suicide in the United States: 1990–1991 through 2003–2004. *Journal of American College Health, 54,* 341–352.

Schwartz, A. J. (2006b). Four eras of study of college student suicide in the United States: 1920–2004. *Journal of American College Health, 54,* 353–366.

Shin v. Massachusetts Institute of Technology, 19 Mass. L. Rep. 570 (Mass. Super. Ct. 2005).

Silverman, M. M. (1993). Campus student suicide rates: Fact or artifact? *Suicide and Life-Threatening Behavior, 23,* 329–342.

Silverman, M. M., Meyer, P. M., Sloane, F., Raffel, M., & Pratt, D. M. (1997). The Big Ten Student Suicide Study: A 10-year study of suicides on Midwestern university campuses. *Suicide and Life-Threatening Behavior, 27,* 285–303.

Suicide Prevention Resource Center. (2004). *Promoting mental health and preventing suicide in college and university settings.* Newton, MA: Education Development Center.

U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System. (2004, fall). *Postsecondary institutions in the United States: Fall 2004 and degrees and other awards conferred: 2003–2004.* Retrieved January 15, 2008, from http://nces.ed.gov/pubsearch/getpubcats.asp?sid=010#

Westefeld, J. S., Homaifar, B., Spotts, J., Furr, S., Range, L., & Werth, J. L. (2005). Perceptions concerning college student suicide: Data from four universities. *Suicide and Life-Threatening Behavior, 35,* 640–645.

Wingate, L. R., Joiner, T. E., Walker, R. L., Rudd, D. M., & Jobes, D. A. (2004). Empirically informed approaches to topics in suicide risk assessment. *Behavioral Sciences and the Law, 22,* 651–665.

Wyman, P. A., Brown, C. H., Inman, J., Cross, W., Schmeelk-Cone, K., Guo, J., et al. (2008). Randomized trial of a gatekeeper program for suicide prevention: 1-year impact on secondary school staff. *Journal of Consulting and Clinical Psychology, 76,* 104–115.

Received July 10, 2008
Revision received October 8, 2008
Accepted October 9, 2008 ■