Introduction

Development of the Youth Suicide Prevention School-Based Guide

The Louis de la Part Florida Mental Health Institute (FMHI) at the University of South Florida under a subcontract from Nova Southeastern University completed a project to develop the Youth Suicide Prevention School-Based Guide with funding through the Drug Free Communities Program, Florida Office of Drug Control.

The following annotated bibliography was created as part of the process for the Development of a School-Based Suicide Prevention Tool Kit grant. This introduction describes the strategies for creating the annotated bibliography. The purpose of the annotated bibliography is to provide a compiled resource of a variety of publications to support the development of the Youth Suicide Prevention School-Based Guide.

One of the first steps to our development of the Youth Suicide Prevention School-Based Guide was to begin to review the current literature available related to suicide prevention and school-based prevention programs. By its nature, the annotated bibliography is necessarily incomplete. It should be noted that we anticipate continuing to add to our knowledge base through updating this annotated bibliography as we find and review additional relevant research.

We began our search for current research with the following parameters and strategies:

• The review began by gleaning citations from the Surgeon General’s Call to Action and the National Strategy,
• Recent literature – Initially our review was restricted to articles only published after 1990, however upon further research this restriction would have eliminated the inclusion of critical articles. This review maintained focus on only the most recent research and only included research before 1990 when it seemed necessary,

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• Search terms used included:
  – Youth/adolescent/teen
  – School/school based
  – Suicide/suicidal/suicides
  – Prevention
  – Intervention
  – Postvention
  – Climate/environment
  – Risk/protective/warning
  – Universal/awareness
  – Education
  – Crisis
  – Screening
  – Programs/programming

• Searched the following data bases:
  – PubMed
  – Article First (OCLC)
  – PsychInfo
  – ISI Web of Science
  – Wilson Select
  – ISI Current Contents
  – Journals@Ovid Full Text

• Included frequently identified citations in selected articles,
• Included if they were extensively cited by other authors,
• Written by noted experts in the field,
• Addressed information not found elsewhere,
• Evaluations of suicide prevention programs, and
• Provided comprehensive information.

A number of the studies used in developing the Youth Suicide Prevention School-Based Guide were included in the 1999 Florida Youth Suicide Prevention Study also conducted by the Principle Investigator, Katherine Lazear. Rather than re-create new reviews, some of these previously annotated articles are included in the present Annotated Bibliography and are indicated with the following citation at the end of the annotation:


Although many resources were initially viewed and surveyed, the research team focused our efforts upon published research articles for this annotated bibliography. Other resource materials and resources (e.g., books, websites, state plans) are being kept on file as additional sources of information. A list of the additional resource material is included at the end of this publication (pages 69–71).

List of reviewed resources but not included in this annotated bibliography:
• Books/Book Chapters
• Manuals/Guidelines
• Prevention Programs/Websites


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In 1997, suicide was the third leading cause of death among 10- to 19-year-olds in the United States, with the greatest increases in suicide rates in the previous decade experienced by black and other minority youth. The purpose of this study was to identify risk and protective factors for suicide attempts among black, Hispanic, and white male and female adolescents.

This study used data from the National Longitudinal Study of Adolescent Health, conducted in 1995 and 1996. A nationally representative sample of 13,110 students in grades 7 through 12 completed 2 in-home interviews, an average of 11 months apart. The authors of this study examined Time 1 factors at the individual, family, and community level that predicted or protected against Time 2 suicide attempts.

Perceived parent and family connectedness was protective against suicide attempts for black, Hispanic, and white girls and boys, with odds ratios ranging from 0.06 to 0.32. For girls, emotional well-being was also protective for all of the racial/ethnic groups studied, while a high grade point average was an additional protective factor for all of the boys. Cross-cutting risk factors included previous suicide attempt, violence victimization, violence perpetration, alcohol use, marijuana use, and school problems. Additionally, somatic symptoms, friend suicide attempt or death by suicide, other illicit drug use, and a history of mental health treatment predicted suicide attempts among black, Hispanic, and white females. Weapon-carrying at school and same-sex romantic attraction were predictive for all groups of boys. Calculating the estimated probabilities of attempting suicide for adolescents with increasing numbers of risk and protective factors revealed that the presence of 3 protective factors reduced the risk of a suicide attempt by 70% to 85% for each of the gender and racial/ethnic groups, including those with and without identified risk factors.

In these national samples of black, Hispanic, and white youth, unique and cross-cutting factors derived from a resiliency framework predicted or protected against attempting suicide. In addition to risk reduction, promotion of protective factors may offer an effective approach to primary as well as secondary prevention of adolescent suicidal behavior.

This study was designed to assess the association between personality disorders, personality traits, impulsive violence, and suicide.

Personality disorders and traits in 43 adolescent suicide victims and 43 community controls were assessed from the parents, using semi-structured interviews and self-report forms.

Probable or definite personality disorders were more common in suicide victims than in controls, particularly Cluster B (impulsive-dramatic) and C type (avoidant-dependent) disorders. Suicide victims also showed greater scores on lifetime aggression, even after controlling for differences in psychopathology between suicides and controls.

Results of this study suggest that personality disorders and the tendency to engage in impulsive violence are critical risk factors for death by suicide.

- The authors focus on various risk factors for suicide, including psychopathology, family history, and issues related to treatment and firearms. The article contains current research findings on the above topics and with information concerning training and policy issues presented by the authors.

- Firearms:
  - Policy that includes legislation for gun control can reduce the overall suicide rate, especially that of youth, anywhere from 23-40% depending on the geographic area.
  - Firearms in the home are a risk for increased suicide even if the gun is stored inside the home; the risk is greatly reduced if the gun is not stored in the home. Guns are rarely purchased for the sole purpose of suicide and are usually weapons that are already in the home.
  - Training should include teaching professional to assess the availability of firearms in the home and communicate with families about the removal of the guns.
  - In terms of service delivery, the professional should follow-up with the family to ensure guns have been removed from the home and if necessary visit the home or be a part of the gun removal process.
  - The gun control legislation has created policy that reduces the suicide rate. Additional laws that reduce the ownership of guns would further decrease the suicide rate.
Suicide prevention programs can be categorized according to the nature of their prevention strategy into eight categories:

- **School Gatekeeper Training** — for school personnel to learn to identify students at risk and how to respond.
- **Community Gatekeeper Training** — for community members in contact with youths.
- **General Suicide Education** — teaches students about warning signs and how to seek help and often incorporates activities to develop self-esteem and social competence.
- **Screening Programs** — Questionnaires and other screening instruments are used to assess risk and provide further assessment and treatment; repeated measures may be used to assess change or program effectiveness.
- **Peer Support Programs** — Programs that are designed to foster peer relationships and competency in social skills with high-risk youth.
- **Crisis Centers and Hotlines** — Trained volunteers provide phone counseling and other services to suicidal persons. These programs may offer a “drop in” crisis center visit or make a referral to other mental health services.
- **Restriction of Access to Lethal Means** — Activities that are designed to restrict access to handguns, drugs, and other means used for attempting suicide.
- **Intervention After Suicide** — Focus is on friends and relatives of a person who has committed suicide to help with effective coping.

The strategies involved with various programs usually have one of two themes:

1. Identification and referral of suicidal adolescents for mental health care — May include general and targeted screening, training gatekeepers, providing general education, and establishing crisis centers or hotlines. Some try to lower barriers for self-referral and others try to increase referrals by others.

2. Strategies to address known or suspected risk factors — Promoting self-esteem and stress management, developing support networks for high-risk youth, providing crisis counseling. Note that no programs reviewed stressed access to lethal means.

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Links between prevention programs and mental health resources are frequently inadequate, which limits the program’s potential effectiveness. Some potentially effective strategies are not used often and others are used quite often (lethal means and peer support are uncommon). School-based programs are common yet there is little evidence that they work and some evidence they may have unexpected negative impact; they frequently use one-time lectures. Many programs that have potential for suicide reduction are not considered or evaluated as suicide prevention programs (e.g., programs that address related psychosocial problem areas like drug and alcohol abuse, runaway services, pregnant teen or high school drop out services). Few prevention programs even establish working relationships with these programs.

The effectiveness of suicide prevention programs has not been demonstrated. “The lack of evaluation research is the single greatest obstacle to improving current efforts to prevent suicide among adolescents and young adults.”

**Recommendations**

- Make sure that suicide prevention programs are closely linked with professional mental health community resources (some studies indicate the need for more comprehensive links with other community resources).
- Avoid reliance on one prevention strategy. This is especially called for since knowledge on effectiveness is quite limited.
- Incorporate promising, underused strategies into current programs.
- Incorporate evaluation efforts into suicide prevention programs (planning, process, and outcome evaluation). “Program directors should be aware that suicide prevention efforts, like most health interventions, may have unforeseen negative consequences. Evaluation measures should be designed to detect such consequences.”

**Modified from:**


This report provides an overview of a national workshop that included suicidologists, public health officials, researchers, psychiatrists, psychologists, and members of the news media. The workshop was convened in order to discuss recommendations and address concerns about how the media should approach or report a suicide (or suicidal behavior) in order to avoid creating a contagion effect.

Contagion is a process where exposure to suicidal behavior of one or more persons influences others to engage in suicidal behaviors. The authors provide evidence that contagion for suicidal behavior does exist and that it is exacerbated and more evident among adolescents. In order to curb this effect the national workshop developed recommendations about how the media and news coverage concerning adolescent suicide can prevent facilitating further suicidal behaviors in adolescents. The following recommendations were provided:

1. Suicide is often newsworthy, and it will probably be reported. Health care professionals should realize that efforts to prevent news coverage will probably be futile, and their goal should be assisting the media towards accurate and responsible reporting.

2. “No Comment” is not a productive response to media representatives who are covering a suicide story. Refusing to speak with the media will not prevent coverage of the suicide and may be inimical because it allows the media to be speculating and presenting assumptions to the public.

3. All parties should understand that a scientific basis exists for concern that news coverage of suicide may contribute to the causation of suicide. The media should be informed that scientific and empirical studies have shown that a contagion effect in adolescents does exist for suicidal behaviors.

4. Some characteristics of news coverage of suicide may contribute to contagion, and other characteristics may help prevent suicide.

5. Health professionals and other public officials should not attempt to tell reporters what to report or how to write their reports regarding suicidal behavior.

6. Public officials and the news media should carefully consider what is to be said and reported regarding suicidal behavior. This can be explained by educating the media on the potential for contagion.

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This paper also described what reporting actions could increase the likelihood of suicidal contagion. Members of the workshop described the following seven characteristics of news reports that may increase the likelihood of suicide contagion:

1. Presenting simplistic explanations for suicide.
2. Engaging in repetitive, ongoing, or excessive reporting of suicide in the news.
3. Providing sensational coverage of suicide.
4. Reporting “how-to” descriptions of suicide.
5. Presenting suicide as a tool for accomplishing certain ends.
6. Glorifying suicide or persons who commit suicide.
7. Focusing on the suicide completer’s positive characteristics, thereby venerating the suicidal youth.

The conclusion of this report describing the recommendations and concerns from a national workshop recognizes that there are types of news reports that may facilitate suicide contagion yet there also exists types of news reports that may have a positive impact on adolescent and the community following a suicide or suicidal behavior in a community. Reports that describes the help and support available in the community for persons experiencing crisis, explain how to identify persons potentially at risk for suicidal behavior, or present information about the risk factors and/or warning signs for suicidal behavior all have the prospect of having a positive effect on a community following a suicide or suicidal behavior.

The author of this study expresses concern about “seemingly benign but hastily planned (suicide prevention programs)”. The author states the psychologically naïve prevention programs may not have their intended effects and have the potential to have a potentially negative effect. In order to test the effectiveness of a suicide prevention program this present study uses an attitudinal survey to evaluate program effectiveness. One problem with this study and where other researchers have criticized similar studies that focused on attitudes is that attitude changes does not equate to changes in behaviors.

• The program being evaluated consisted of educating students in a sophomore level health class about the risk factors, warning signs, and intervention strategies with suicidal peers. Following the dissemination of such educational materials the students were shown a 15-minute video that tells the story of a girl who attempts suicide and a boy who completes suicide. Both behaviors are portrayed as inappropriate responses and that may have been influenced by pre-existing mental illness. A 40-minute structured discussion follows and allows for students to discuss and recognize the difference between normal and abnormal adolescent feelings and stressors. At the end of the discussion a positive self-esteem checklist is distributed to students in order to restore any feelings of positive self-esteem that may have been diminished by any over-identification with the students portrayed in the video.

• Study design — sophomores from three suburban high schools were selected from the Chicago area. The intervention group consisted of 203 students (119 males and 84 females) and a control group of 121 students (53 males and 68 females). These groups completed a survey one day before the suicide prevention presentation and again 30 days following the presentation. Both groups received the same instructions for completing the surveys and the classes’ health teachers administered all surveys. Demographics such as birth date, race, classroom, and teacher were matched in the two groups and only those that were matched were included in the cohort for study. The surveys were influenced by a previous study by David Shaffer (1987), which assessed students’ attitudes about suicidal behaviors.

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• **Analysis** — the present study used a logistical regression model in order to determine the relationship of the probability of giving the desired response to three variables: baseline response (desired vs. not desired) at the first exposure, gender (male vs. female), and group (intervention vs. control). The dependent variable was the probability of giving a desired response 30 days after exposure to the intervention. The analysis considers all possible interactions between the three variables: baseline by gender, baseline by groups, gender by group, and baseline by gender by group. The observed effect of the intervention was then measured by the four comparable differences between the intervention and control groups. The p-value was taken from an analysis of variance table within the regression analysis.

• **Results** — this study found that at baseline “most adolescents did not hold sensible or accurate views about suicidal behavior: 74% did not believe teenagers who kill themselves are usually mentally ill, 55% would not seek out help for themselves if they felt very upset, 53% would not encourage a suicidal friend to seek help from a mental health professional, 44% would ignore or joke about a peer who threatens suicide, and 43% would counsel a suicidal friend without obtaining help from someone else. This study found that following intervention there was a positive significant increase in help-seeking for a peer, help-seeking for oneself, increased the likelihood of self-disclosure to a friend about suicidal ideations, an increased awareness about the role of mental illness in students who may express suicidal thoughts or engage in suicidal behaviors, and an increased likelihood that the student would act in an empathetic manner by listening rather than ignoring or joking about a peer’s suicidal “cry for help”. The study did not seem to significantly change the attitudes of those adolescents who already considered suicide as a possible option. Of 31 adolescents who held that suicide was an option at baseline, 14 gave up this attitude and switched to a more positive and adaptive response while 17 did not.

• **Conclusions** — the author states that two messages need to be communicated to all adolescents: adolescents must understand that suicidal attempts and completions are usually symptoms of treatable psychiatric illnesses; adolescents should prepare themselves for emergency emotional situations.

The author of the present study expresses the need for suicide prevention strategies due to the increased rate (in adolescents) of exposure to suicide and the statistics that show that adolescents are engaging in suicidal behavior at a rate that far exceeds the adult population. Since most adolescents attend school, it would seem logical and efficient to introduce suicide prevention education into the school setting. The author states however that such education has been met with varying degrees of resistance and that school administrators, educators, teachers, and even parents erect barriers to the introduction of suicide prevention in the schools, most of which are grounded more in myth than reality. The author presents ten of the most common barriers in implementing a suicide prevention education program.

• Belief that talking about suicide increases the likelihood of suicidal behavior - this is a major barrier and one that is based on the idea of suicide contagion. The author presents the rationale behind this barrier and points out that how information about suicide is presented is more important and may have more of an impact on suicidal behaviors than if education is provided or not.

• Denial of youth suicide - the author cites evidence that although it is not unusual to hear school administrators and educators say that suicide is not a problem in their school, research has found that most underrated their schools' suicide rate. Reluctance to accept the problem of adolescent suicide may come from a lack of awareness, an inability to comprehend that some adolescents actually experience such extreme distress that self-destruction is perceived as the only possible solution.

• Role of educator - in most schools, teachers and staff are incessantly being asked to teach any number of education programs and with all of the demands, teachers may feel overwhelmed and may feel pressed for time, physical energy, and emotional energy.

• Teacher attitude toward suicide - teachers’ feelings of anxiety, panic, or frustration, generated by the topic of suicide, together with their beliefs that they must get on with the curriculum, they may be held responsible for suicidal behavior, or that suicidal behaviors are manipulative render them unable and potentially unwilling to engaging in suicide prevention and intervention skills and education training and/or practice.
• Insufficient helping resources- if education helps to increase students identified as potentially at risk for suicidal behavior then more helping resources will be required. However some schools may not be in a position to take on the additional monetary costs of suicide education.

• Potential values conflict- school administrators must insure that the values and attitudes expressed by teachers to students are based on facts and fit with community expectations, values, and attitudes. Without such a fit, school administrators may help erect barriers.

• Potential concern from parents regarding suicide prevention- some schools may feel pressure from concerned parents who may feel that their children should not be provided with information on social problems, especially suicide. It is important that schools provide parents with information on how suicide will be presented to students. It is also important that schools involve the parents in the actual development process of a school-based suicide education program.

• Adolescent feelings of responsibility- some education programs involve utilizing adolescents to recognize a student potentially at risk for suicidal behavior, being a friend to a person in need, listening and talking to that person, and getting that person the appropriate care. Teachers, administrators, and parents may not feel comfortable giving students this much responsibility and this feeling may act as a barrier.

• Common versus suicidogenic antecedents- some believe that there are several common causes underlying the different social problems and if these causes were dealt with by providing good life-skills then the incidence of all social problems should also decrease. Thus, there would be no need for a program specifically addressing suicide.

• Proof of program effectiveness- although there are numerous suicide prevention education programs in existence, very few have been empirically evaluated, which may make administrators, educators, and parents apprehensive about implementing such a program.

The author concludes by offering entry point suggestions for how to introduce a suicide prevention program into schools. Some suggestions include gaining entry through the Department of Education of the provincial or state government which will provide access to all schools as the department’s mandate is to set educational curriculum requirements for the province or state, program entry may wish to be introduced to schools of a particular district through the local school board, or gaining entry through the administration of a local school. Finally the author discusses the importance of a credible communicator/educator and actual suicide prevention training.

This study tested the efficacy of a school-based prevention program for reducing suicide potential among high-risk youth. A sample of 105 youth at suicide risk participated in a three-group, repeated-measures, intervention study. Participants in (1) an assessment plus 1-semester experimental program, (2) an assessment plus 2-semester experimental program, and (3) an assessment-only group were compared, using data from pre-intervention, 5-month, and 10-month follow-up assessments. All groups showed decreased suicide risk behaviors, depression, hopelessness, stress, and anger; all groups also reported increased self-esteem and network social support. Increased personal control was observed only in the experimental groups, and not in the assessment-only control group. The potential efficacy of the experimental school-based prevention program was demonstrated. The necessary and sufficient strategies for suicide prevention, however, need further study as the assessment-only group, who received limited prevention elements, showed improvements similar to those of the experimental groups.

Conclusions:

1. The study indicated the importance of targeting high-risk populations for prevention efforts. This is in contrast to universal prevention programs targeting large student populations. The study showed that at-risk individuals could be identified and targeted and that these individuals responded in a positive fashion to the prevention intervention program.

2. Results found that when given MAPS, an assessment protocol tool intended to measure suicide-risk and related factors in detail, individuals expressed a reduction in suicide risk regardless of whether they were included in the program or not.

3. The intervention program “generated results relevant to the development of cost-effective approaches, school-based programs, and institutional policies. This program, and prevention programs in general, are less costly than outpatient or inpatient treatment programs for suicidal behaviors.”
Experts generally agree that statistics on suicides represent underreporting of the true number of suicides because of religious implications, concern for the family, and financial implications regarding insurance payment. It is believed that many sudden deaths are suicides, but there may be no hard evidence.

It is currently impossible to know the number of attempts, however, estimates are between 50 and 200 attempts for every completed suicide. Somewhere between 6% and 13% of adolescents report they have attempted suicide at least once. The prevalence of suicidal ideation appears extremely high. The most common method for completed suicide is firearms, for both genders. The most common method for attempts is overdose. The most commonly identified primary youth risk factors include substance abuse; prior suicide attempt; affective illness such as depression; antisocial or aggressive behavior; family history of suicidal behavior; and availability of firearms.

The majority of suicide victims suffer from psychiatric illness. The single best predictor of suicide death is a previous suicide attempt. Self-efficacy and coping skills are related to suicide attempts.

Stressful life events have been found to be a precipitating factor of suicide attempt as well as substance use. Media coverage and social imitation have also been implicated, particularly in youth suicides.

Precipitant factors in youth suicide have also been identified: completed suicides are often preceded by a shameful or humiliating experience or the fear of failure or rejection and interpersonal conflict with a romantic partner or parent. Dealing with sexual identity or orientation fits into this category.

Regarding curriculum based interventions, there is little evidence that these programs have the desired effects and some suggestive evidence they may have negative effects on some students (e.g. students most at risk react more negatively to this type of program). Support for innovative interventions should only be encouraged when there is a requirement for evaluation included. Effectiveness evaluation is underdeveloped and our knowledge base is thus limited as to what works.
Specific Recommendations:

There are more efficient and effective strategies than curriculum-based programs: “implementation of integrated primary prevention programs, suicide prevention education for professionals, education and policy formation on firearm management, education of media professionals about the social imitation factor in adolescent suicide, more efficient identification and treatment of at-risk youth, and crisis intervention and postvention programs.” (see p. 177). The authors note that none of these require major reorganization or creation of new services. (Each of the above are discussed in depth as either primary, secondary (early intervention), or tertiary (treatment) prevention).


This study of 3,000 high school students in Massachusetts’ public schools found that students who describe themselves as gay, lesbian, bisexual, or “not sure” are more likely to make suicide attempts than those who describe themselves as heterosexual. One in ten of all teens in the survey reported a suicide attempt within the last year. Those describing themselves as gay, lesbian, bisexual, or “not sure” were more than three times as likely to report an attempt in the last year. Suicide attempts were six times more likely for non-heterosexual males than for heterosexual males; and two times more likely for non-heterosexual females than heterosexual females. As the third leading cause of death for 15–19–year-olds in 1996, suicide claimed the lives of 5,000 young people in that age group. The authors also state that other traits independently associated with risk for suicide attempt are drug use, higher levels of violence or being a victim of violence and Hispanic ethnicity.

Annotated Bibliography I 12/03


- This article provided a comprehensive review of literature focused on adolescent and youth suicide. The authors reviewed risk factors, protective factors, overall rates and secular changes, prevention strategies (school-based and community-based), and treatment for adolescents who may be at risk for suicidal behavior. The authors used PsycINFO and Medline as research search tools.

### Epidemiology of Suicide

- This article stated that suicide is uncommon in childhood and early adolescence yet increases markedly in the late teens and continues until the early twenties when the incidence levels off until the early sixties when there is another dramatic increase in the incidence markedly in men.

- Gender also seems to play a role in adolescent suicide: although suicidal ideations and attempts are greater in females, death by suicide is more common among males. This trend is not consistent globally. The authors suggest that the reason for this difference in deaths by suicide across gender may be explained by the methods most commonly used by males and females; males are more likely to use a more lethal method such as a gun where females are most likely to use less lethal means such as pills.

- Youth suicide is more common among whites than African Americans and rates are even higher in Native Americans. Rates are generally lower for Asian/Pacific Islanders.

- Secular trends indicate that following a threefold increase in male suicide rates between 1964 and 1988, the increase in the white male suicide ceased and began to decline in the mid 1990s. Rates in African-American males, while still lower than rates in whites, did not level off or decrease until 1995. Although the reasons for this decline are somewhat nebulous the authors propose a decrease in alcohol and drug abuse, decreased access to guns, and an increase in the use of antidepressants.

### Risk Factors

- **Personal Characteristics**
  - Psychopathology — more than 90% of youth suicides have had at least one major psychiatric disorder, with depressive disorders being the most common followed by substance abuse disorders; disruptive disorders; and conduct disorders, which are often dual diagnosed disorder comorbid with mood, anxiety, and substance abuse disorders.
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- Prior suicide attempts — this characteristic is one of the strongest predictors of completed suicide. Between one quarter to one third of youth suicide victims have made a previous attempt.

- Cognitive and personality factors — the authors state that hopelessness may increase risk although state that this may be confounded association once depression is taken into account. Poor interpersonal problem-solving ability, social problem solving, and aggressive-impulsive behavior are all given by the authors as factors that have been shown to increase risk.

- Sexual orientation — this article suggest that although homosexual, bisexual, and trans-gendered adolescents seem to have a dramatic increased risk for non-lethal suicide behavior, this could be mediated by other risk factors such as alcohol abuse, depression, family history of attempts, and victimization.

- Biological factors — serotonin 1A receptors and genes such as TPH and SERT are two examples the authors provide of genes that have been implicated as contributing to an increased risk for suicidal behavior.

- Family Characteristics

  - Family history of suicidal behavior greatly increases the risk for suicidal behavior. Authors cite a study that found youth suicide to be nearly five times more likely in the offspring of mothers who had completed suicide and twice as common in the offspring of fathers.

  - Parental Psychopathology — high rates of parental psychopathology especially depression and substance abuse, are provided as factors associated with suicidal behaviors.

  - Parental divorce — the authors state that although suicide victims are more likely to come from non-intact families, the association between divorce and suicide decreases when accounting for parental psychopathology.

  - Parent-child relationships — parent-child conflict is no longer considered to be associated with suicidal behavior, however the authors state that impaired relationships do increase the risk for suicidal behavior. This increased risk may stem from an underlying psychiatric problem in the youth that may impair the relationship.

- Adverse Life Circumstances and Socio-environmental Factors

  - Stressful life events
  - Physical abuse
  - Sexual abuse
  - Socioeconomic status
  - School and work problems
  - Contagion and imitation

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Protective Factors

- Family cohesion
- Religiosity

The authors provide a comprehensive review of School-based suicide prevention programs, which include the following strategies:

1. Suicide Awareness Curriculum — the authors provide research that supports curriculum yet also provide research that states that this prevention strategy may not have any effect on adolescent suicide and may even be harmful for some groups of students. The authors end by stating that there is insufficient evidence to not support or support curriculum.

2. Skills training— the authors cite that this prevention program thus far has shown a great deal of promise. This training consists of teaching students adaptive problem-solving skills, coping skills, and cognitive skills.

3. Screening— the authors state that screening has shown promising results but also has three dilemmas: multiple screenings necessary to minimize false-negatives may be costly, may not be acceptable as curriculum by administrators, and depends on the effectiveness of the referral.

4. Gatekeeper training — the authors state that this method seems to be effective and does not show any potential for harm or an overwhelming burden to staff and faculty.

5. Peer helpers — there is not sufficient evidence on the effectiveness of peer helping programs.

6. Postvention/crisis intervention — the authors state that although research is sparse, it is imperative for crisis interventions to be well planned and evaluated.

7. Crisis Centers and hotlines — the authors state that hotlines do have the advantage of offering immediate help that is convenient, accessible, and available outside of usual office hours. The also state that although there is not a great deal of research on the effectiveness of hotlines, studies have found that 14%-18% of suicidal youth have used a hotline to get through a crisis.

8. Restriction of firearms — since the most common method of death by suicide in the U.S. is by firearms and given the fact that suicidal individuals are often impulsive and may be ambivalent about killing themselves, restriction access to lethal methods during this period may help to prevent suicide. The authors state that research has shown that restrictions on firearms have reduced suicide rates.

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19. Media education — research cited in this article found that by maintaining a positive relation with the media and educating the media about suicide contagion in order to yield stories to reduce harm, suicide rates decreased by 7% in the first year after implementation of this relation between school and media. In the second year the rates declined another 20%. The authors encourage schools to develop a positive relation with the media in order to prevent suicide and to prevent contagion.

10. Education and training for primary care physicians and pediatricians — the authors advocate training physicians to more actively screen patients for depressions and signs of suicide risk and cite one study that found following training that improved a physicians diagnosis and treatment for depression, suicide rates dropped in the area covered by these physicians.

Treatment

• Psychotherapy — the article states that thus far the only treatment that has been shown to successfully treat suicidal adolescents has been dialectical behavioral therapy, an offshoot of cognitive-behavioral therapy (CBT).

• Psychopharmacological interventions — thus far SSRI antidepressants have been shown to be an effective treatment in suicidal teens and have been shown to reduce the frequency of impulsive and aggressive behaviors. The use of clozapine in schizophrenic patients has also shown to reduce suicidality.

The authors conclude by stating that no one-prevention/intervention strategy by itself is enough to combat suicide, but that a comprehensive, integrated effort involving many sources of help is necessary.

- The researchers surveyed the school districts in Washington State to determine what the school districts are actually doing in response to the Youth Suicide Prevention Plan for Washington State. The article addresses “…the roadblocks that schools perceive, or ran into, when making decisions about suicide programs…to look into factors (school district size, title of reporting person, and knowledge of the Washington State Plan) that might have influenced how schools perceived roadblocks, and to identify what types of input were needed to make decisions on suicide programs.”

- The article addresses issues related to the components of prevention such as education, gatekeeper training, policies for schools and direct screening of students, which comes from the current literature.

- The survey involved school districts that had a middle or high school. Of 256 school districts identified the researchers received 163 responses, which amounted to a 62% return rate. The primary individuals completing the survey were superintendents (39) and school counselors (62) and other (19). The responders also included a small number of principals, nurses, directors of student services and social workers.

- The survey consisted of four areas and contained Likert scale questions. The areas in question were “…current prevention and intervention programs, planned prevention and intervention programs, roadblocks to starting program, and items needed to start a program.”

- In term of prevention programming, over 41% of the districts utilized guest speakers for prevention and approximately 40% utilized classroom instruction.

- In terms of prevention policy, only 29.2% of the school districts indicated having policies and procedures for suicide prevention/intervention. The other districts indicated “other” by 34.2%.

- In terms of intervention programming, 46% of the schools utilized gatekeeper training for the staff and “some process of screening” was utilized by 26.6% of the districts. Upon further investigation the researchers found that all the students were not screened in direct screening interventions, only “multiple individuals.”
• In terms of intervention policies, only 33% of schools had policies and procedures for intervention while the other districts indicated “other” 26%. Larger school districts reported more often as having polices and procedures while superintendents were more likely to report not having any procedures or polices in place than school counselors (84.2% vs. 55.7%).

• In terms of the Washington State Plan only 42% of the respondents indicated being familiar with the plan. With more school counselors being familiar than superintendents (the plan was not sent out to the superintendents when disseminated).

• Districts with ongoing prevention plans found the “…negative response of parents, teachers, principals, district administrators, and lack of knowledge, were all seem as less of a roadblock…”

• Districts without prevention programming found roadblocks related to a lack of knowledge. In addition, the researchers indicate clusters of roadblocks “…insufficient staffing, finding funds, and scheduling concerns formed one cluster that was perceived as most problematic, that potential negative responses of parents and teachers, legal issues, and lack of knowledge formed a second cluster, and that potential negative responses of principals, district administrators, and students formed the least problematic cluster.”

• In addition, the school districts indicated six needs for prevention and intervention programming, which included “…information, cost assessment, legal input, staffing needs, research reports, and consultation…”

• Based on these findings the authors recommend measures related to training, policy and procedures, and program “champions.”
A “renewed” interest in suicide prevention programming occurred after the Surgeon General’s Call to Action to Prevent Suicide and the National Strategy.

- Schools are an appropriate and logical setting for prevention programs due to the mission of schools to educate and to protect. In addition, schools must also meet the demands placed on them while utilizing resources effectively.

- “…effective prevention programs must (a) have a clear conceptual and empirical base (b) use proven implementation and instructional strategies, and (c) be ecological or systemic by including all relevant components of the school and community.”

- The programs can be either categorical, which address problems related to risk behaviors (substance abuse) and that are usually a part of the greater health curricula and in place over time, or, general, which entails the promotion of protective factors. The protective factors may be “more powerful predictors of outcomes than risk factors”, despite the lack research on these factors to reduce suicide. Due to comorbidity of risk factors and other youth issues, the protective factors may serve to “moderate suicidal behavior.”

- Discusses the 3 categories of prevention programming from the Institute of Medicine (IOM) that should be used in a complimentary fashion: universal, selected, indicated. “In North America, there are published reports of a variety of universal programs, no selective programs, and a single indicated program addressing suicide prevention.”

- The author discusses the empirical basis for universal programs including such concepts as the tendency for adolescents to discuss suicide with peers rather than adults and the lack of help seeking behaviors in adolescents.

- Through universal programs, gatekeepers in schools will be able to identify at-risk youth and be able to appropriately respond and get help for the youth.

- The following components, in order, are described by Kalafat as being the “model-comprehensive universal suicide prevention programs”:
  - Policies and procedures are in place at the schools so the administration can effectively address those at risk, attempters and completed suicides, as well as the ability to refer to community services.
Gatekeeper training for all faculty and staff that should include:
- School policies and procedure
- Risk factors, myths, warning signs
- Action and referrals

Parent training that covers the same material as the gatekeeper training.

The use of student suicide awareness classes with guidelines as to the length, grade of students, appropriate media and warning signs.

The following programs are described by the author as meeting the above requirements:
- Adolescent Suicide Awareness Program (ASAP),
- Combined Lifelines/ASAP,
- Florida, Miami-Dade Public Schools,
- Washington State.

The author describes first and second generation programs. First generation programs were interested in addressing many topics and lacked focus. The evaluations of these studies were found to be mixed with knowledge gains either not found, found in males and females, or only females with no implementation data presented. Second generation programs are defined by the author as being more focused on helping students identify peers and telling adults with evaluations indicating an increase in finding help for troubled peers.

The author notes that changes in knowledge do not mean a change in behavior. “Research needs to be done that provides evidence for the relationship between these proximal outcomes and such intermediate behavioral outcomes as increased identification and referral of at-risk youth by school-based adults and students.”

The author discusses an example of an indicated program, the Reconnecting Youth Program for those at risk for dropping out of school.
• Approaches cited by the author that do not work:
  – One-time programs; students cannot be monitored for their reactions during assemblies.
  – Media that uses presentations by those that have made attempts should not be used to avoid any potential for modeling behavior.
  – Failing to use school resources (“out-sourcing”) does not enhance the use of local resources.
  – Any program not implemented appropriately will not produce positive results.
  – “… there is no basis for promoting a single approach, such as indicated approaches or annual screenings, rather than emphasizing the complementary role of different empirically and conceptually grounded ones.”

- The authors discuss the importance, strategy and steps related to the implementation and institutionalization of prevention programs in schools. The focus of the article is to examine the process by which a school-based suicide prevention program, Adolescent Suicide Awareness Program (ASAP), was implemented and institutionalized in school districts.

- The ASAP program goals and creation are delineated by authors. In addition the authors cite various authors and sources pertaining to successful strategies for implementation and institutionalization.

- To demonstrate the successfulness of the implementation and institutionalization of the ASAP program, the researchers surveyed 31 of the public high schools that received training in the ASAP program, and subsequent implementation, during the years 1982-1987 to determine the continued level of institutionalization and implementation and the retention of the program components. In addition, in 1992 representatives from 11 schools identified as being responsible for the current ASAP program, were interviewed concerning the elements that made retention of the program possible over the 10 years it was implemented at the school.

- The schools included ASAP programs where the ASAP staff provided the initial training, where community consultants trained the schools after ASAP training, or involved other suicide prevention programs.

- Overall, the length of time the program was implemented was reduced and the teacher/parent training components were all but eliminated with only 3 schools indicating that they provided the training 10 years later.

- As assessed from the structured interviews with program representatives, the majority of the schools maintained fidelity when implementing the program and felt comfortable making changes to the program to adapt to changing student needs. When asked about barriers to implementation or retention, the interviewed representatives recognized three areas, “time and scheduling”, “supportive administration”, and “committed staff.”

- Over the ten-year period only one school indicated a completed suicide.

- The authors indicate that “…the importance of the creation of structural and organizational changes that supported programmatic efforts.”

- The study was conducted to determine if the curriculum in question would increase student’s knowledge about suicide and elicit positive attitudes that would encourage engaging suicidal peers and adult help-seeking from the students.
- 253 students from the 10th grade were in the study. The students represented 2 middle class, suburban schools. The students were divided in the year between their health class (half the students) and their PE class (the other half of the students) with the students rotating to the other class after half the year.
- The health class students were exposed to the curriculum during the first week of health class and the PE class would serve as the unexposed group. The three suicide curriculum classes were 40-45 minutes in length.
- One day before the health class began, and the suicide curriculum, the pretest was given to the health and PE students. The researchers did not obtain permission to pre-test the students because the administration felt that the test was not any different than regular, normal exams they took at school.
- Post-testing of the students occurred three weeks after the health class suicide curriculum and was given to both the health class students and the physical education (PE) students.
- The suicide curriculum in question provides teacher, staff and parent education, as well as appropriate intervention and community referral information prior to student implementation.
- The curriculum utilized the stress model — the concept that teenagers are under “extreme stress” and this is related to adolescent suicide.
- The program was measured in four areas: “…knowledge about suicide; attitudes toward suicide, help seeking, and talking about suicide in one’s classes; self-reported responses to the awareness of potential suicide in peers; and, reactions to the suicide awareness classes.”
- The pool of questions for the pre/post-test given to students was developed by the teachers with the understanding that they were to develop questions as they would for any other material in which they would be testing the students.
- Between the two groups, health class students and PE students, the researchers did not find a significant difference in the pre-testing concerning adolescent suicide.

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• In terms of the suicide post-testing knowledge questions, “All significant differences favored the suicide curriculum group in the right direction.”

• In sum, the students who were exposed to the suicide curriculum were “…more likely to disagree with a cluster of items that consisted of negative statements about seeking help and intervening with suicidal individuals. In addition they were less likely to agree that talking about suicide in class may stop some kids from trying to kill themselves. Students in both groups disagreed with the statement that talking about suicide in class makes some kids more likely to kill themselves and agreed with the statement that talking about suicide in class makes it easier for some kids to ask for help.”

• Students in the exposed group were also more likely to engage other friends about a friend and to engage that friend. The exposed group was also more likely to get adult help for a friend. In addition, more exposed students would encourage their friend to call a hotline, get advice from other friends about the friend in question and not encourage friends to get help from a mental health center.

• Overall, the exposed students found the class to be interesting and 64% felt the class would make it less difficult to encounter their friends’ problems.

• 10% of the exposed students felt they “…knew someone who was helped a lot by the program, and the same percentage indicated that they knew someone who was upset a lot by the program. Eighty–one percent thought other students in their area should participate in the in the same program.”

• The authors note that “…responses to questionnaires do not necessarily predict behavior in encounters with troubled peers.” The researchers also concluded that the use of a suicide curriculum can “…have the desired effects on participants’ attitudes and expectancies for behavior.”
• The authors of this study attempted to determine whether or not the rate of suicide attempts and exposure to risk factors for suicide differed between physically abused adolescents and a comparison group of adolescents who had not been abused. The authors identified 99 cases of adolescent (12-18) abuse using the New York State Central Register for Nassau and Suffolk Counties, between August 1989 and August 1993. The comparison group was a community sample of 99 non-abused adolescents (12-18) recruited from the same communities using random-digit dialing. Subjects were matched by age, gender, ethnicity, and socioeconomic status. The authors excluded subjects across both groups if there was the presence of intra-familial sexual abuse, an IQ of 70 or less in the subject, or the inability of the subject or the subject's parents to read English. The authors used the Conflict Tactics Scale to screen out abused subjects in the control group.

• The authors gave the following three hypotheses that the study was designed to test:

1. Physically abused adolescents would show a higher rate of suicide attempts than non-abuse adolescents and would also have a higher cumulative burden of risk factors that the non-abused group.

2. Physically abused adolescents who had attempted suicide would have been exposed to a unique pattern of risk factors when compared to the non-abused subjects.

3. Physically abused adolescents who had attempted suicide would also have been exposed to a unique pattern of risk factors when compared to subjects who had been abused but never attempted suicide.

• The rationale behind this study was that traumatic and chronic stressful events increase an adolescent's vulnerability for depression, substance abuse, and conduct disorder, thereby negatively affecting the adolescents' social, emotional, and cognitive development, which increases the likelihood that the adolescent will respond to acute stressors in self-destructive, risk-taking ways, sharply increasing risk for suicidal behavior.

• The authors found that although almost three times as many abused as control adolescents attempted suicide, the difference was not statistically significant. This insignificant result could be attributed to the low incidence of suicidal behavior or may be due to the low numbers of cases.
The authors did however find that subjects in the abused group showed significantly greater exposure to risk factors for suicide than did the controls. A significantly larger number of risk factors were found for the abused than the controls and a larger number of risk factors were found for the abused adolescents who attempted suicide than those who did not attempt. The burden of risk for each adolescent was assessed using a weighted index that consisted of assigning one point for each of the following risk factors: experiencing more than one death or separation; any combination of dysfunctional family cohesion and adaptability as defined by the FACES III tool that has been found to have alpha reliabilities of .68 for the entire measure, .77 for the cohesion factor, and .62 for the adaptability factor as well as a Pearson correlational coefficient of .84 for the entire measure, .83 for the cohesion factor, and .80 for the adaptability factor; parental substance abuse; unipolar disorder (depressive disorder); conduct disorder; school failure; perception of a non-caring mother or father; one or fewer close friends; adolescent substance abuse; disruptive disorder (including ADHD); and exposure to a suicide by family member, friend, or relative.

Abused attempters differed from abused non-attempter in their perception that their mothers were less caring and their families were less cohesive (the emotional bonding families have for each other) than those of the abused non-attempters.

Abused attempters were more likely than abused non-attempters to meet the criteria for psychiatric diagnoses. Abused adolescents were also more likely than abused non-attempters to have had a disruptive disorder, conduct disorder, and to have had a parent, friend, or relative who had attempted suicide.

Overall, the abused adolescents showed significantly greater exposure to risk factors for adolescent suicide, including family disintegration, and diagnoses of depression, disruptive behavior disorders, and substance abuse and dependence.

The authors conclude that the abused adolescents carried a significantly greater cumulative burden of risk factors for suicide than did the non-abused adolescents. Although the rate of attempts in the study’s group of abused adolescents was not significantly different than that for the non-abused adolescents, it seems that abused adolescents are more at risk for making an attempt sometime in the future that adolescents who have not experienced physical abuse due to their higher number of cumulative risk factors for suicidal behavior.

- Schools represent the best places to do suicide prevention because of the consistent amount of time spent in the school setting. In addition, high school teachers work with the largest population of suicide attempters and completers.
- Only a little over half of all schools teach suicide prevention and only 1 in 3 states require that suicide prevention be presented in schools.
- The author indicates that a prevention program should consist of 3 levels: “primary prevention (prevention), secondary prevention (intervention), and tertiary prevention (postvention).” Each of these components must be in place for a comprehensive program.
- The author has delineated 9 components for primary prevention, which is defined as “…all school programs and activities aimed at decreasing student suicide thoughts, attempts and completions.” The author also suggests “prevention offers the most direct method for saving student lives from suicide and therefore should receive much attention.”
  - The district should have in place a policy concerning suicide, which will ensure that programs are being delivered in a consistent, effective manner.
  - School personnel should receive education in the warning signs and risk factors for suicide. Health teachers typically identify the recognition of suicide as part of their professional role. In addition, the faculty/staff should feel confident in their ability to identify students and collaborate together for more effective recognition and problem solving.
  - Suicide prevention education, or awareness, should be a part of the curriculum. Teachers should be aware that research indicates that discussing suicide will not induce suicidal behavior in their students.
  - A peer assistance program should be developed and implemented.
  - Activities that increase the connection that students feel toward school should be implemented.
  - Partnerships between the school and families should be developed with families involved in the planning of prevention programs and information dissemination.

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Partnerships between the school and the community need to be developed. All schools should have an awareness of the resources in their community and have in place contacts for student suicidal behavior.

A school crisis intervention team should be established.

The author also provides information on Secondary prevention, or intervention. The broad principles are discussed as well as the steps to be taken by teachers for student safety, assessment of risk, follow-up measures and school staff “debriefing” meetings.

The author also recognizes specific postvention activities after a suicide attempt or completion. Schools should respond within 24 hours of the event while acting in a “concerned and conservative manner.” In addition all staff should be informed of the event and students should be informed during the first class of the day. Counseling should be set up in schools at specific sites. A specific staff member should have contact with the media.
This study provides the reader with a list of fifteen of the most common myths surrounding the issue of adolescent suicide. “Despite the increased attention towards adolescent suicide prevention, several myths surrounding adolescent suicide still persist. When such myths are accepted and unchallenged by health educators, suicide misperceptions by parents, students, community members, and school professionals may result. A lack of support for suicide prevention programs may soon follow.” The present paper presents the following fifteen myths about adolescent suicide, all of which may hinder and undermine any efforts to prevent suicidal behaviors in adolescents.

1. Adolescent suicide is a decreasing problem in the United States.
2. Adolescent homicide is more common than adolescent suicide.
3. The majority of adolescent suicides occur unexpectedly without warning signs.
4. Adolescents who talk about suicide do not attempt or commit suicide.
5. Most adolescents who attempt suicide fully intend to die.
6. Educating teens about suicide leads to increased suicide attempts, since it provides them with ideas and methods about killing themselves.
7. Adolescents cannot relate to a person who has experienced suicidal thoughts.
8. There is no difference between male and female adolescents regarding suicidal behavior.
9. Because female adolescent complete suicide at a lower rate than male adolescents, their attempts should not be taken seriously.
10. The most common method for adolescent suicide completion is drug overdose.
11. All adolescents who engage in suicidal behavior are mentally ill.
12. If an adolescent wants to commit suicide, there is nothing anyone can do to prevent its occurrence.
13. Suicidal behavior is inherited.
15. The only person who can help a suicidal adolescent is a counselor or a mental health professional.

The authors conclude that in order to reduce suicidal behavior in adolescents, it is essential that those persons who have the potential to spend the most time with adolescents have accurate and reliable information. One of the most important pieces of information are the myths that surround adolescents suicide.
Postvention steps for comprehensive school program:

Steps Before a Suicide:

- A plan should be established before a crisis occurs for timely help to students and for preventing any possible suicide clusters. The plan should be clear and concise to avoid “hysteria and confusion following the suicide.”

- A postvention team should be established that includes members such as school counselors/psychologist, teachers, school nurses and individuals from area resource organizations. The team leads the postvention activities with the goals of minimizing trauma to the students, faculty and staff as well as the implementation and communication of the plan. The team will ensure an “organized and systematic response to a traumatic event.”

- All faculty and staff should be reminded at the beginning of each school year the possibility of PTSD (Post traumatic stress disorder) symptoms that students may exhibit in relation to a suicide event. In addition, faculty and staff should be aware of the possible behavioral issues related to the trauma including acting out, truancy and substance abuse. Teachers should be encouraged to refer students to the school counselors and be knowledgeable about community resources for mental health services.

- The school should have appropriate community links that provide response to any trauma at school and these links should be established in advanced.

Steps After a Suicide:

- The postvention plan should be activated within 24 hours of the suicide. An immediate response can reduce trauma to students and staff and possibly prevent any suicide clusters.

- During the postvention period, administrators and staff and the overall school climate should be centered around “…concern, privacy and conservatism.”

- The school staff should be informed immediately, the day the suicide occurs, by the school principal and a meeting should be held before school hours by the principal to give factual information to the staff and establish the school schedule for the day.

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- Teachers should make an announcement in the first class of the day concerning the death of the student and to let students know of special counseling areas set-up throughout the school. Areas should be set up throughout the school that allows the students and staff an opportunity to communicate with a professional about their grief and reactions to the death.

- The suicide should not be glorified in any way and the school administrators should avoid activities that may glorify the student's death. Emphasis should be placed on alternative measures for problem solving.

- Parents should be informed immediately and be encouraged to contact the principal for questions, information, and postvention plan details. In addition, factual information should be given to all teachers and staff to dispel possible rumors.

- One postvention team individual should be in charge of interacting with the media and answering questions related to the student's death. The individual should be a mental health professional and inform the media that inappropriate reporting can possibly cause suicide clusters.

- The school board should be notified of the postvention activities through a written/oral presentation.

- The emotional climate of the school should be monitored even after the initial trauma of the event.

- Postvention procedures should be evaluated after a crisis event.

- 228 high school health teachers (84% return rate) completed a survey related to the risk factors for adolescent suicide, and the steps to be taken if a student threatens or completes suicide. The mean age of the teachers was 44 and the mean years as health teacher 14 years.
- The teachers could receive an overall score form 0-35 after completing three knowledge scales. The questions were created based on a literature review.
- The mean score received by the teachers was 19.4 with a range of 9-30. Overall female health teachers knew more than males while age and education and number of years working did not have an effect on the scores. In addition, those teachers who had an experience with a suicidal student scored higher on the survey.
- Overall a majority of the teachers knew the risk factors, appropriate steps for intervention and school response. However, only 9% of the teachers believed that they could identify a student at risk for suicide.
- The authors suggest increasing the education concerning adolescent suicide received by teachers.
- Based on the results of the study, the authors indicate four recommendations:
  1. “Teacher education programs should spend more time on developing the skills necessary to identify students at risk for adolescent suicide;
  2. Peer assistance programs aimed at training students how to recognize peers at risk and how to make referrals should be implemented in all schools;
  3. Future studies should investigate why knowledge of adolescent suicide may differ based on sex of high school health teacher;
  4. Future studies should further investigate the factors associated with a suicidal student approaching a specific teacher for help: Does increased knowledge about adolescent suicide and treatment resources help to facilitate this process?” (page 162)

- This study reviewed 14 studies examining whether suicide prevention centers have a positive preventative effect on suicide rates. This study built upon previous reviews, which the author states did not include all relevant studies in their evaluation. These previous studies found that there was no overall combined effect of suicide prevention centers on rates of suicide rates. This study focuses only on ecological studies and time-series studies, whereas all previous research focused only on ecological studies. For this reason the author points out that no cause-effect conclusions can be made based on the results of this study. Results indicate that seven of the studies reviewed provided support for a positive preventative effect. Only one study found an increase in the suicide rates and six failed to find any significant effects (positive or negative; two sided tests). Despite the inability to draw temporal and a cause-effect relationship between centers and rates of suicide the preventative effect from suicide prevention centers on suicide rates, even in a correlational sense, may be important to justify their existence. The studies’ methodologies are reviewed and limitations on the authors’ conclusions are discussed. The results of this study provide some support for the preventative effect of suicide prevention centers.
• Information presented on the characteristics of adolescents including: gender differences in respect to attempts/completions, the consistent use of firearms between both genders as the method of choice, and the use of overdose/pills as the attempters method of choice.

• Risk factors: psychopathology, previous attempt, hopelessness, negative personal history, access to guns, 95% of completers had at least one mental disorder.

• The author discusses myths surrounding suicide: talking about suicide will encourage suicidal behavior, and that suicide is an impulse act without prior suicidal thought.

• Cites extensively the national survey of prevention programs conducted by Garland, Shaffer and Whittle in 1989. In review of the programs the author indicates that 96% of the programs utilized the “stress model” of prevention which represents teen suicide “as a response to a significant or extreme amount of stress, ignoring the substantial amount of research that has shown that adolescent suicide and suicidal behavior is strongly associated with mental illness or psychopathology.” The author adds that the stress model “has been criticized strongly because it ‘normalizes’ suicide and suicidal behavior, suggesting that given enough stress, everyone may be vulnerable to suicide.”

• The Mental health model of prevention “may make suicide or suicidal behavior a less appealing method for coping with problems thereby prompting individuals to seek professional services.” (Referenced from Shaffer, et. al., 1988, Preventing teenage suicide: A critical review. JAACAP, 27) See below

• Emphasis on the use of direct screening as a better way to reach those students in need. Discusses the low-base rate of suicide and the futility of using universal prevention for identifying at-risk youth.

• Many researchers advocate for the use of direct screening measure for adolescents but these measures are rarely used.

• The author suggests the following changes for suicide prevention programs in the future:
  – Programs should use the mental health model rather than the stress model of prevention,
  – Assessment instruments should be utilized at the beginning of the program to measure actual suicidal behavior with school psychologist being educated on these assessments,
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- Empirical research needs to indicate if the programs are effective over short and long term,

- The programs should target adolescents at risk on “multiple dimensions of suicidal behavior;”

- Collaboration between community and research should increase with the use of prevention programs.

Analysis of state-level initiatives directed at youth suicide prevention. It looked at legislation, mandated or recommended school-based suicide prevention curriculum, funding, special advisory council, a state plan, development and dissemination of materials, and assessment. In 1994, over 31,000 Americans took their own lives; 2200 were under age 20. Suicides have exceeded the number of homicides every year since 1981. It is the second leading cause of death in youths aged 15–19, and third leading cause for those 15–24 years. Between 1980 and 1994 the rate among ages 15–19 increased by 30.6% and 120% for ages 10–14. The largest increase for nonwhite males was for Black males. In the CDC's *Youth Risk Behavior Surveillance Report (1995)*, one in four students in grades 9–12 had thought seriously about attempting suicide in the 12 months preceding the report. In 1990, the Public Health Service Act was amended to provide funds for the National Institute of Mental Health (NIMH) grants for demonstration projects targeting prevention of youth suicide. There is a table of suicide numbers, rates, and rate increases for all states for periods 1979–1981 and 1992–1994, ages 15–19. Elements of Sound Preventive Interventions (developed in a large scale APA study in 1988, 1989): 1) shaped by at least a preliminary understanding of the risks and problems encountered by the target group; 2) aimed at long-term change; 3) provided social support and the teaching of social skills; 4) strengthened the natural support from family, community, or school; 5) managed to collect rigorous research evidence to document success.

**Elements of Effective School-based Programs:**

- **Conceptualization** — Describes the expected outcomes, methods to meet the objectives, underlying theories that guide the program, comprehensive in nature and focus on overall aspects of physical, mental, social, and emotional health rather than on a singular disease or at-risk behavior such as suicidal behavior.

- **Design** — Specify the scope of content to be covered; identify sequence in which skills and concepts will be conveyed by grade level; provide developmentally and culturally sound training; include detailed instructional lesson plans; coordinated school, parent, peer, and community programming. Include cognitive, affective and behavioral skills such as problem solving, decision-making, increasing self-control and self-esteem, and adaptive coping strategies.

- **Implementation** — Use well-trained presenters and allow for adequate time, resources, and support. A year or multiyear duration is more effective than short-term (six weeks or less).
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• **Institutionalization** — Comprehensive programs are more likely to become institutionalized if there is support from administration and staff (a concentration on multiple health behaviors may be necessary).

• **Dissemination** — The ability to transfer the intervention to other settings is critical. Exemplary programs tend to be disseminated to different community settings.


This review presents various adolescent suicide prevention strategies and what research suggests about each of these various strategies. The present study focuses only on adolescent suicide prevention at the high school level because the authors’ referenced research suggests that suicide rates increase dramatically during these years. The authors differentiate between primary and secondary prevention strategies where primary prevention refers to efforts designed to intervene with individuals before any clinical manifestation of a particular disorder occurs, whereas secondary prevention refers to the identification of problems in individuals in their early stages, before problems become severe.

- **Primary prevention programs**
  - Curriculum-based programs — this approach includes both emphasizing a positive school climate as well as educating students in the classroom about suicide. The authors state that there have been both positive and negative effects of these types of programs but also emphasize that those that did result in negative effects were flawed and rested on assumptions subsequently proven false. The authors present criticisms for focusing solely on curriculum for prevention efforts such as the potential for lack of efficiency and effectiveness, little evaluation, and the fact that most examinations of suicide curriculum have focused on attitude and knowledge not behavior. The authors state that there has not been very much empirical research evaluating the effectiveness of these programs, which is one reason why the authors state that further research is needed in this area.
  
  - In-service training for school staff — these programs are similar to curriculum approaches except the education is presented to school staff and faculty. The authors state that the benefits of such an approach are the opportunity to discuss and devise crisis response teams and that these approaches may be more acceptable to administrators, educators, and parents than student curriculum. Studies on the impact of this approach have found promising results such as increasing staff’s knowledge, attitude, and referral practices of students potentially at risk for suicidal behavior. The authors conclude however that more empirical research is needed to determine the true impact of educating school staff on issues surrounding adolescent suicide.

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Other primary prevention strategies — the authors state that two of the most frequently and potentially most effective methods for prevention adolescent suicidal behavior are reducing access to lethal means and suicide education for the media.

The authors state that a problem with primary prevention methods is that “each is limited by its passive approach to the prevention of teen suicide”.

• Secondary prevention programs
  – Screening — the authors state that comprehensive screening (screening all students) may present too many obstacles such as resource expenditure and parental disfavor. For these reasons targeting those students considered potentially at risk for suicide may help avoid the aforementioned problems and will help identify and treat those student who screen positive for suicidal behavior.
  – Other secondary prevention approaches — although screening is the most frequently recommended secondary prevention strategy, crisis hotlines and counseling/psychotherapy are also discussed by the authors.

• Obstacles to prevention — these include the prevalence of myths maintained by parents, educators, and administrators. Legal issues and liability often present schools with apprehension yet the authors state that schools can and have been sued for lack of suicide prevention programs.

• Recommendations from the present review:
  – All school staff should receive in-service training regarding the warning signs of suicide and what school and community resources are available to deal with suicide.
  – Each school district should have a written, specific referral procedures of students suspected of possible suicidal behavior.
  – Although not directly related to school-based practice, other potentially effective primary prevention efforts include restricting adolescents’ access to lethal methods and suicide education for the media.
  – Direct assessment of higher-risk adolescents through screening procedures should be considered an essential component of effective component of effective school-based suicide prevention.
  – Prevention programs should use both primary and secondary prevention strategies and involve multiple levels of influence as well as multiple risk factors.
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- Prevention may wish to shift focus from the prevention of separate disorders to the promotion of general healthy living skills using a competency-based model for preventing a number of disorders.

- Suicide prevention efforts should be supported by administrators, teachers, and parents. Without such support, efforts are likely to fail.

The author discusses court cases that have involved educators and administrators concerning a student’s suicide. The author discusses cases that involved the concept of negligence or “…some sort of wrongful action on the part of one person, which results in injury to another person.” The concept of negligence is discussed as well as the four main components of negligence that must be found to be true in court. The author discusses four cases from 1960 to 1997. Based on the case reviews, teachers and other individuals have been found responsible for the suicide deaths of their students when negligence can be established. The author notes the possibility of school districts being sued in the future for not providing suicide prevention programs if the growing trend is for schools to include those programs. In terms of ethics, the ACA has produced guidelines for counselors that allow them to disclose information from a client if the client intends to harm themselves or others. The author discusses the role educators must take in suicide prevention and the aspects of suicide prevention programs. The author indicates that the principal of the school should take responsibility for implementing a suicide prevention program and steps to implementation that include the review of the plan by a legal representative, the training of teachers and thorough documentation of any suicide related activities.

The author states that school districts and their employees are caught in somewhat of a bind, though. Courts may decide that school districts have a duty to provide training for their employees, and districts may be found negligent if they fail to provide that training. Once a district provides training, however, it is likely that courts will decide that those employees who received the training, since they now possess specialized knowledge about suicide, will owe a duty to protect students from harm.
This article presents statistics on completed suicides and the time trends of such statistics. The authors discuss high-risk populations for suicidal behaviors and discuss varying rates of completed suicide by age, gender, and race. The same statistics are provided for attempted suicidal behaviors as well.

This article discusses various risk factors for suicidal behavior and classifies risk factors as either distal or proximal. Distal risk factors “can be thought of as the foundation for attempted and completed suicides”. These risk factors are the underlying not overtly immediate risk factors for suicidal behavior. Proximal risk factors however are “closely associated with the suicidal event, and can be thought of as precipitants or triggers for suicidal behavior”.

**Distal risk factors:**

- **Psychopathology** — this factor is presented by the author as the strongest known risk factor for completed and attempted suicide. Psychological autopsies have found that over 90% of all completed suicides in all age groups are associated with psychopathology.

- **Substance Abuse** — a substance abuse disorder has frequently been identified as a risk factor for suicidal behavior, with alcohol being the most commonly abused substance across all age groups. Alcohol intoxication at the time of death has been found in approximately half of youth completed suicides.

- **Neurochemical** — post mortem studies of suicide completers have found evidence of decreased brain levels of serotonin (5-HT) or its principle cerebral spinal fluid metabolite (CSF 5-HIAA). There may be a possible link between lowered levels of total plasma cholesterol and an increased risk for suicidal behavior.

- **Familial risk factors** — family history of psychopathology and/or suicidal behavior are provided as risk factors. Disrupted family environments (divorce, separation, or widowhood) and maladaptive family environments (abuse, family conflict, and family stress) are also provided as evidence-based risk factors for suicidal behaviors.

- **Sexual orientation** — the author states that there currently is no evidence from unbiased, population-based studies that non-heterosexual orientation is a risk factor for suicidal behavior and although some research has found that sexual orientation as a risk factor may be confounded by preexisting mental and/or substance abuse. The authors of this present study suggest that further research is needed in this area.

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Proximal risk factors:

- Access to a firearm,
- Severe, stressful life events such as physical illness, economic difficulties, or legal difficulties,
- Contagion—exposure to suicidal behavior in others through the media, peer group, or family.

The author concludes by providing some principles that can provide guidance in making clinical decisions about suicidal behaviors. Some of these principles include: identifying and providing appropriate intervention/treatment of psychopathology, especially for comorbid disorders; risk factors are cumulative so the greater number of risk factors, the higher risk for suicidal behaviors; comorbid disorders, especially of mood disorders with other illnesses, greatly increases the risk for suicidal behavior across groups; a history of physical or sexual abuse in an already vulnerable youth is an important indicator for future suicidal behavior; the prescription of multiple medications for physical and/or emotional illnesses must be monitored; the clinician must be aware and alert to any potentially lethal means that may be available to a youth potentially at risk for suicidal behavior; the complexity of suicidal behaviors requires complex and multiple interventions for effective prevention, the most appropriate method will probably be one that is long-term and is designed to address the many risk factors associated with suicidal adolescents.

The author notes that national or statewide data on the frequency of suicide attempts in the general population or among gays do not exist. He also notes that disseminating unproven programs is not warranted since there is evidence that some school suicide-awareness programs are not effective and may have unintended negative effects. Since mental and substance abuse disorders are almost always involved in suicides, the early identification and treatment of such may be the best hope, for now.

The two community-based studies done found that between 2.5 and 5% of suicides in their samples were people known to be homosexual. However, sexual orientation was determined in psychological autopsies and identification is suspect. Over 90% of all suicides, regardless of orientation, involved mental and substance abuse disorders. Because of the possible negative effects of school suicide awareness programs the author suggest that “sustained, comprehensive, theory-driven preventive interventions are needed to target risk and protective factors which have been verified through rigorous epidemiologic research.” As well, they should be pilot tested and include long-term outcome evaluations to determine whether suicidal behaviors have been reduced.


This program was a seven week, two hour meeting program built around a gradual, controlled confrontation and exploration of inner experiences and life difficulties related to suicidal behavior. There was also an accompanying emphasis on coping strategies as a way to immunize against self-destructive feelings. The program effectively reduced students' suicidal feelings and increased their ego identity cohesion and ability to cope. In some classes hopelessness was also reduced. Most students were satisfied and none indicated any harm suffered because of participation.

The authors contend in their study that “A negative, harmful impact of exposure to discussions of suicide can be expected where exposure provides suicide as a model to be imitated or identified with.” They suggest the real question is not whether suicide prevention programs are effective, “but rather what kind of prevention program can be effective with what kind of population.”


Suicide is ranked eighth as a cause of death in the United States and is the third leading cause of death in the 15 to 24-year age group. Schizophrenia, along with depression, is an important risk factor for suicide and attempted suicide. The incidence of suicide in 1994 has been estimated along with the 1994 projected costs of suicide and suicide attempts. The projected number of completed suicides for 1994 was over 32,000, with an estimated 109,500 hospitalizations for suicide attempts. Completed suicides resulted in direct costs and indirect costs relating to loss of earnings, with the total cost estimated at over $397,000 per suicide. Suicide attempts incur greater direct costs during hospitalization and a percentage of patients will suffer permanent disability requiring long-term care and loss of earnings; total costs averaged over $33,000 per attempt. Major cost savings may be achieved by targeting the prevention of suicide. Further research is needed to improve our understanding of suicide.


The present study examined utilization of psychological or emotional counseling by suicidal adolescents to answer questions about the extent to which health services can contribute to the prevention of adolescent suicide.

The study used data from Wave 1 of the National Longitudinal Study of Adolescent Health, which involved a household-based interview with a nationally representative sample of 15,483 adolescents from grades 7 to 12. Of these, 2,482 adolescents were classified as suicidal, as indicated by an affirmative response to the question “During the past 12 months, did you ever seriously think about committing suicide?” For this group, the study asked the following questions: 1) What proportion receives psychological or emotional counseling? 2) What are the sources of this counseling? 3) What factors are associated with receipt of such counseling?

Less than one third (28%) of suicidal adolescents received psychological or emotional counseling. The most common sources of care were private doctors' offices (37%) and schools (34%). Factors associated with receipt of counseling in the past 12 months included age, race, degree of suicidality, depression status, and having had a physical examination during the same period.

Only one third of those who reported suicidal ideation and behavior received psychological or emotional counseling. Although not all of these young people may identify a need for counseling, this finding still suggests that many of those at risk of harming themselves do not receive professional help. However, on the positive side, those who do use counseling services tend to do so on the basis of their being in the greatest need, rather than their parents' capacity to pay for services. Counseling services have an important role to play in suicide prevention, and a variety of sources of care need to be available. Although counseling services are vital, a range of other strategies is necessary to reduce the youth suicide rate.

Thirty percent of 137 gay and bisexual youth (ages 14 – 21) reported at least one attempt and almost half of those reported more than one attempt. Three-fourths of the attempts followed self-labeling (within the same year as self-identifying). Other associated problems were depression, conflict with peers, romantic problems, arrests for misconduct, and substance abuse. A disproportionate number of the attempts were moderate to high lethality. These findings supported psychiatrists’ concerns that suicide attempts among gay youth are more severe. As well, attempters had more feminine gender roles and self-identified at earlier ages, and were more likely to report sexual abuse. Family problems were the most frequently cited reasons for attempts. The authors note that “…the unusual prevalence of serious suicide attempts remains a consistent and disturbing finding…”

• Risk factors derived from psychological autopsy study conducted by Shaffer, et. al., (1996). The risk factors were found to be a psychiatric disorder (90% of the victims), with over half experiencing symptoms over 2 years; past suicide attempt in one-third of patients; mood disorder in 40%; substance abuse disorders in 25% of victims and 66% of older males; conduct disorder was found but not at a level of significance; “half of the suicide victims had been in previous contact with a mental health professional.” Family problems were not found to be significant factor aside from low levels of communication between parents and children.

• Evidence that suicide may be influenced through contagion/imitation, which may lead to clusters or suicide epidemics. The imitation can be influenced through media (news or fictional accounts). (Reference Gould & Shaffer, (1988). The impact of televised movies about suicide. New England Journal of Medicine, 318, 707–708)

• Elements of a “heuristic model for suicide prevention” include the following assumptions: a underlying condition must be in place such as a substance abuse or mood disorder, the suicidal behavior will be precipitated by a “stress event” such as a “disciplinary crisis.” Taken together the actions can create a “chain of events.”

• “Inhibitory factors that make suicide less likely include living in a culture in which suicide is strongly taboo, having available support or the presence of others, and having a slowed-down mental state. Conversely, the presence of other factors may facilitate suicide. These include living in a culture in which taboos about suicide are weak, having ready access to weapons or other methods of suicide, learning of a recent example of suicide by hearsay or in the media, being in an agitated or excited state, and being alone.”

• Prevention strategies can include means restriction and media guidelines. Means restriction research has indicated “negligible effects” while media guidelines (those disseminated by CDC) have not been evaluated for efficacy.

• Hotlines and crisis services “have little impact on the suicide rate in a community.” Hotlines do not involve those at greatest risk (more females call than males) and the impulse nature of suicide means that many victims will not take the time to consider help. In addition, “crisis services often give inappropriate advice.”
- Three “case-finding strategies” are used in suicide prevention: suicide awareness education ("reduce stigma and promote self-referral"), gatekeeper training ("teach them how to identify individuals at risk and how to establish a connection with an appropriate source of help"), and direct screening ("teenagers themselves are asked to indicate their mood and whether or not they are suicidal").

- Problems with gatekeeper training may include the “nonspecific” nature of warning signs that may lead to “inaccurate intervention.”

- Direct screening measure that involves the “systematic screening for the predictors of suicide in general high school populations.” In the author’s model, the Columbia Teen Screen would be administered followed by the DISC for students who have been recognized as high risk. The DISC produces a report to the clinician who will then interview the child with follow-up conducted by a case manager.

- The Columbia Teen Screen (CTS) study conducted in 1996 screened 2004 teenagers for eight New York high schools. Of the students screened, 546 had a positive screen for at least one criteria (depression, substance abuse, etc). The study found that “only 31% of those who suffered from a major depressive disorder, 26% of those with recent and frequent suicide ideation, and 50% of those who made a past suicide attempt were actually in treatment.”

The CTS cost approximately $37 per child to be screened, but $250 per student referred. The author estimates that the cost of screening 1000 students would be $25,000. The future goals of the program include the addition of the Voice DISC and the utilization of classrooms supplied with laptops and headphones to screen 20–25 students at a time.

The age, sex, and ethnic distribution of adolescents who commit suicide is significantly different from that of the general population. The present study was designed to examine psychiatric risk factors and the relationship between them and demographic variables.

A case-control, psychologic autopsy study of 120 of 170 consecutive subjects (age, < 20 years) who committed suicide and 147 community age-, sex-, and ethnic-matched control subjects who had lived in the Greater New York (NY) area. RESULTS: By using parent informants only, 59% of subjects who committed suicide and 23% of control subjects who met DSM-III criteria for a psychiatric diagnosis, 49% and 26%, respectively, had had symptoms for more than 3 years, and 46% and 29%, respectively, had had previous contact with a mental health professional. Best-estimate rates, based on multiple informants for these parameters, for suicides only, were 91%, 52%, and 46%, respectively. Previous attempts and mood disorder were major risk factors for both sexes; substance and/or alcohol abuse was a risk factor for males only. Mood disorder was more common in females, substance and/or alcohol abuse occurred exclusively in males (62% of 18- to 19-year-old suicides). The prevalence of a psychiatric diagnosis and, in particular, substance and/or alcohol abuse increased with age.

Results of this presented study suggest that a limited range of diagnoses—most commonly a mood disorder alone or in combination with conduct disorder and/or substance abuse—characterizes most suicides among teenagers.

This was a case control, psychological autopsy study of 120 of 170 consecutive suicides under age 20 and 147 community matched controls in New York City. However, the criteria for identifying which of the completed suicides were gay youth was biased toward under-identifying gay suicides. (Psychological autopsy is a method in which information about the deceased’s symptoms and patterns of relationships are obtained from survivors who knew the victim during life). Seventy percent of these suicides were Caucasian, 15% were Hispanic, and 11% were African American. This study found no support for higher rates of homosexuality among suicides. (Note this statement: “There were no control subjects (N=147) whose parents knew of their child having homosexual experiences or a homosexual orientation.” Ergo, no gays in the control group? But five of the adolescents said they’d been teased for it. Study indicates a slightly, but not significantly, higher rate of homosexual experience among teen suicides than controls. The authors acknowledge the rate may actually be higher because of their ascertainment approach. These authors draw attention to two real problems: a) rate of homosexual experience among teen suicides than controls. The authors acknowledge the rate may actually be higher because of their ascertainment approach. These authors draw attention to two real problems: a) some gay teenagers may experience significant adjustment difficulties that require precise study and appropriate intervention; b) suicide is most common in individuals with mental health problems rather than in individuals with a “hard life.”

• Three suicide prevention programs were evaluated. While the program did have some components and goals in common, the programs were different in some aspects. One program specifically differed in respect to the students who received the program (grade 10 instead of 9, and “urban minority students) and the length (4 hours), type of facilitator, and the type of setting (large or small groups). The other two programs differed in respect of the students exposed (white, rural or suburban areas) and the model of the program (stress vs. problem solving).

• Six schools were chosen as the “demonstration” schools and 5 schools serviced as controls. Two schools received program 1, two schools program 2 and two schools program 3. The schools chosen to participate had not experienced a suicide prevention program, and were matched in terms of ethnicity, number of students and the number of families below the poverty level in the local area.

• “A 48-item, self-completion questionnaire was developed that inquired about attitudes to suicide, warning signs of suicide and attitudes to seeking help for emotional distress.” The control schools did not receive questions related to program evaluation on the post-testing (1 month later).

• Pre/post-tests were matched by student for comparison.

• Overall, students had a good reaction to the program with 66% finding them to be “comforting” and only 10% “…finding them upsetting or knowing someone who had been upset by the program.”

• Black and Hispanic students rated the programs “…more favorably than Caucasians...” especially in relation to program 1 which was administered to a large black and Hispanic population (77%). The program ranked the lowest was delivered to a predominantly white population (91%).

• Whereas few students felt the programs to be “dangerous” for other students, some students changed their mind, from pre-test to post-test, concerning the use of suicide as a possible solution to their problems, with more black males finding suicide to be a solution after the suicide prevention program.

• Black students exposed to a prevention program were more likely to change their response to report that they did not know “a place other than at school to talk to a professional about problems.” Initially, these students responded that they did know a place.

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• The authors indicate that the benefits of the program are the students’ reaction to the programs in which most students found the programs to be “interesting and personally helpful.”

• A small percentage of students indicated that exposure to a program “… made their problems worse or caused distress…”

“The study used four experimental and three control schools, ninth and tenth grade students. The control schools had never conducted a suicide prevention program.

The programs consisted of the common one-shot 1.5 or three hour in-classroom session by teachers.

Attempters were more likely to have undesirable attitudes about suicide and help-seeking. Attempters were less likely to think other students should participate in the same program and more likely to believe that talking about suicide in the classroom makes kids more likely to try to kill themselves. In other words, they reacted more negatively to the program than did non-attempters. Attempters were also more likely to think drug and alcohol use was a good way to deal with problems and more likely to acknowledge substance use.

There was no evidence of the program’s impact on attempters’ deviant attitudes when control and exposed attempters were compared.

The study found no evidence for the effectiveness of curriculum-based, educational programs. The authors also note that purely educational programs do not usually intend to identify high-risk students, and their ability to alter those pathological attitudes appears limited. Their suggestion is that more effective programs would use techniques that combine efficient case identification with individualized evaluation and intervention.”


- The present study conducted a critical review of teenage suicide prevention based on findings from a controlled study of psychological autopsies.

- Many teenagers in the psychological autopsy study committed suicide after an acute disciplinary crisis or rejection or humiliation, with a brief stress-suicide interval.

- About half of the youth suicides had had previous contact with a mental health professional (depression, antisocial behavior, drug and alcohol abuse, and learning disorders).

- A high proportion of the suicides had a 1st or 2nd degree relative who had committed suicide.

- Studies have not shown the effectiveness of one-shot, school-based programs but have suggested the value of school-based screening, since students have identified themselves and expressed their desire for help.

- Programs that deny the mental health factors involved and present suicide as “understandable, tragic, heroic, or romantic response to stresses coming from uncaring adults or institutions” may increase the chances of imitation.

The authors of the present study contend that “…suicide prevention programs must move from a focus that is uniquely and specifically on suicide to the development of programming that seeks to impact more broadly focused risk and protective factors.” – thinking in terms of “causal agents” is not appropriate to the issue of suicide (large number of common risk factors, conditions that protect against one disorder protect against another, nonspecific personal vulnerabilities that increase one’s susceptibility). The authors add “no single solution will prevent the expression of a particular disorder at all developmental stages.” – developmental trajectory of suicide.

Effective Prevention Programs: Effective prevention programs should be integrative and comprehensive and should take into consideration that:

- There is more than one solution to a problem.
- High-risk behaviors are related.
- An integrated package of services required in each community.
- Aimed at changing institutions vs. individuals.
- Timing is critical – start early, well before anticipated emergence of problem.
- Continuity of efforts must be maintained (no one-shot efforts). Continuing follow-up, and booster sessions are necessary.
- Issues of program dosage, intensity, duration, and fidelity must also be considered.

Outcome objectives of suicide prevention programs would be to “(1) reduce the number of antecedent conditions of risk present, (2) reduce the acquisition of vulnerabilities, and (3) increase the number of protective factors — all after a careful ecological analysis of the characteristics of the conditions in the community…in which our target population is functioning.” The authors also suggest that we should build “on what we now know about factors that enhance development for all children and youth and target the reduction of conditions that impede optimal development…”

The present article gives a brief description of court cases concerning adolescent suicide and how these cases may impact issues of liability for schools, school districts, and individual persons within the school. The article describes the two legal theories that are the most relevant and that inspire suicide-related lawsuits: tort claim of negligence and constitutional claim on due process. Whether a school can be held liable for a student's suicidal behavior will be based on these two theories.

- **Negligence** — the authors define negligence as the breach of a legal duty by one person or entity that causes injury to another person or entity. In order for a school to be held liable based on negligence, a plaintiff must establish four elements of a negligible cause of action:
  - A legal duty owed
  - A breach of the duty owed
  - A causal relationship between the breach and the plaintiff's injury
  - An actual loss of or damage suffered by the plaintiff as a result

All four of these elements must be established, the first two elements being the most important. The authors also provide the case of Wyke v. Polk County School Board as a case example of negligence wherein the school board was held liable in the death of a 13-year-old boy who had attempted suicide on two previous occasions in the school. The school neglected to inform the parent of these attempts and was subsequently found liable. This case also addressed the issue of foreseeability saying “if ever there was a situation where a person of ordinary prudence would recognize an acute emotional state, this was it…a prudent person would not have needed a crystal ball to see that the boy needed help and that if he did not get it soon, he might attempt suicide again”.

- **Due process** — for suicide-related claims this theory states that “a plaintiff must overcome a recognized legal proposition that governments are not required to guarantee a student's safety”. In order to do that “a plaintiff must show that a special relationship exists between school officials and the student or that school officials themselves have actually created the danger to which the student was exposed”. The author states that this burden of proof is more difficult to prove. The authors provide the case of Armijo v. Wagon Mound Public School as an example of due process theory in relation to suicidal behaviors in schools. In this case a student overtly stated that he was going to shoot himself. Later on that day the student was suspended for threatening a teacher. The principal
did not notify the student’s parents of the suspension. When the parents returned home they found their son dead; he had shot himself in the chest. The court later determined that the school aide who had heard the student initially voice his suicidal ideations could not be held liable (potentially because the aid reported the incident to a school counselor). The court did determine that the principal, school counselor, and the school district should be sent to trial for further consideration.

The author concludes by offering the following suggestions that schools may wish to address in order to avoid being held liable for a student’s suicidal behavior:

• Have a written prevention policy or crisis management policy in place that discusses warning signs and risk factors, appropriate responses to students at risk, and notification procedures.
• Seek out professionals who can help inform policy development.
• Train staff and faculty on all elements of a suicide prevention or crisis management policy. A school may also wish to train students so they know when and where to report potential suicide threats.
• Heed warnings and cries for help.
• Principals should work with their staff to create and enforce a welcoming and supportive school climate.

- The authors discuss the need for indicated prevention programs in schools to prevent suicide as well as the limitations and issues surrounding these programs.
- The article evaluated the long-term effects two indicated prevention programs: Counselor CARE (C-CARE) and Coping and Support Training (CAST) derived from the longer Reconnecting Youth program. C-CARE involves an assessment of the student, a counseling session for support and links to a school based counselor and or other professional. CAST involves 12 sessions in which the students are exposed to “small-group skills-training and social support intervention.” The programs were compared against the “usual care” given to the students through the school procedures.
- The study involved 460 students identified as being at-risk and representing 7 high schools. The students were randomized between the three study groups: C-CARE, C-CARE and CAST and the “usual care” from the school procedures.
- The students that received the programs, C-CARE and CAST, were “…associated with favorable attitude toward suicide and suicidal ideation.” The programs “…were associated with significantly different rates of decline in depression, hopelessness, anxiety, and anger.”
- The CAST program was more likely to be associated with “…greater problem-solving coping immediately after the CAST intervention and at follow-up.”
- The authors discuss the study limitations and provide possible explanations for the sex differences seen between the students and in the condition groups.

The present study was an ancillary study utilizing an 18 month follow-up survey of a study conducted in 1990 and 1991. This original study was intended to evaluate help seeking behaviors and increased knowledge and/or awareness about suicide warning signs. The original study was conducted among 9th grade students in four different schools.

Students of two schools were exposed to a 90-minute suicide prevention program intended to increase help seeking behavior, confronting peers, and recognizing teens who may be at risk for suicidal behavior. The other two schools were control schools and received no intervention. Eligibility criteria for the schools included never having received any type of suicide prevention activity. The two intervention groups were matched with the controls for ethnic distribution, size of enrollment, and SES.

Students in all groups received questionnaires eliciting information about their attitudes about suicide and help seeking. The intervention groups were given the same questionnaire following program exposure. Groups were found to be comparable on all previously mentioned potential confounders and results indicated that the intervention group did not experience any significant gains in knowledge, awareness, or help-seeking although baseline measure indicated a surprising few teenagers showed any deficiencies in knowledge or awareness. Therefore there was little opportunity to dramatically increase existing attitudes and knowledge.

The authors of the present study conducted an 18-month follow-up survey with teenagers who participated in the aforementioned study. The present study provided a questionnaire designed to elicit information about what students had in fact done when confronted with depression or suicidal impulses in themselves or peers. Therefore this study was intended to evaluate actual behavior as opposed to attitudes or beliefs about what one would do in a crisis situation or when confronted with a troubled peer. The treatment and control groups were compared on each questionnaire item individually using two-tailed Fisher exact tests.

The study was not able to show any significant effects of the curriculum on help-seeking behavior or suicide attempts. Only two items showed any statistical significance, with fewer exposed girls saying that they had told a depressed friend to call a counselor and fewer exposed girls saying they had talked to a friend about a bad personal or emotional problem that they had experienced. There is an impression that these types of programs are rather ineffectual.
This study also suggests three promising areas for preventive initiatives: students were receptive to programs on mental health issues; they were not willing to seek help for emotional problems from adult helpers, so education on the nature of the treatment process could be beneficial; many students will divulge that they are suicidal or have emotional problems for which they would like help, which predisposition may make systematic screening of adolescents feasible.

The authors recommend against implementing new curriculum programs typical of the one-shot approach. They note that efforts to intensify exposure should be made cautiously since there is no demonstration of the safety of the programs and in light of the fact that students who have made suicide attempts may experience a negative impact. They also contend “school-based screening shows promise.”

**Modified from:**


**Suicide Prevention and School Crisis Management Program (SPSCMP) Dade County Public Schools — Miami, FL**

“The Dade County Public School System completed a five-year, longitudinal evaluation of their youth suicide prevention program. Data from school years 1989–1990 and 1993–1994 was analyzed. Zenere and Lazarus describe this program as guided by certain principles and components of effective school system based programs. They note that effective strategies should incorporate prevention, intervention, and postvention measures. They also identify common and important components, which is helpful to any school district considering implementing a school or community-based program.

The curriculum component is delivered to grades pre-kindergarten through 12 by the To Reach Ultimate Success Together (TRUST) Program. The pre-kindergarten through grade five curriculum is a drug education curriculum that stresses themes relevant to making healthy and positive choices (e.g., self-awareness development, communication skills enhancement, decision-making skills, drug information, and development of positive alternatives). The curriculum provided to grades six through 12 addresses more developmentally appropriate themes for those age groups, with the topic of teen suicide not formally introduced until the 10th grade in the mandatory “Life Management Skills” class.

Evaluation of the program consisted of analysis of the hotline data, which included 2,698 incidents of suicidal ideation, 699 suicide attempts, and 23 completed suicides of DCPS students during the first five years of SPSCMP. From 1980 to 1984 there were a total of 145 students who killed themselves. Between 1980 and 1988 (prior to SPSCMP implementation) there was an average of 12.9 student suicides per year, with 19 occurring in 1988. Analysis found a 62.79% decrease in student suicides since the inception of the program (school year 1989–90). From 1989 through 1994 there was an average of 4.6 student suicides per year. Suicide attempts also steadily decreased: from 243 in 1989-90 to 95 in 1993–94. This represents a rate decrease from 87 per 100,000 to 31 per 100,000. Suicidal ideation fluctuated and returned to previous levels in 1993–94. As well, during this 1989–1994 time period the student population increased by 14.95%. Additionally, grades kindergarten through five accounted for 30.34% of the suicidal ideation and 17.8% of suicide attempts. Middle school students accounted for a disproportionate amount of suicide ideations and attempts, while high school students accounted for 60.87% of suicide completions (although they are only 26.92% of the student population). Middle school children accounted for the rest of the completed suicides.

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Interestingly, grades six, seven, and eight account for the highest percentage of ideations; grades seven, eight, and nine have the highest number of attempts; and grades eight, nine, and 11 had the highest number of completions. This data indicates the following: the rate of suicidal ideation remained stable in spite of the prevention programming; however, suicide attempts and completions were drastically reduced. This information supports Shaffer’s (1988) contention that school involvement in prevention efforts must be at a greater and sustained level. More profound is the finding that no student who expressed ideation or attempts, and, therefore, received DCPS intervention, later went on to complete suicide. Zenere and Lazarus argue that it is critical to identify students at risk. Based on the trends in their data, Zenere and Lazarus suggest emphasis on developing communication and coping skills, and problem solving behaviors in grades kindergarten through five; followed by introduction of suicide prevention curriculum in grade six. Also, suicide prevention information needs to be provided to all school staff and parents, and crisis intervention and mental health services need to be better coordinated. Finally, provision of indicated services need to be delivered in a more timely manner."

Books/Book Chapters

Reviewed resources, but not included in this Annotated Bibliography.


Manuals/Guidelines

Reviewed resources, but not included in this Annotated Bibliography.


Prevention Programs/Websites

Reviewed resources, but not included in this Annotated Bibliography.


Notes

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Introduction

The purpose of this bibliography is to provide a current, updated resource on topics related to youth suicide prevention and school-based prevention efforts. The Annotated Bibliography II aims to extend the knowledge base which first supported the development of the Youth Suicide Prevention School-Based Guide.

With funding from the Institute for Child Health Policy at Nova Southeastern University through the Drug Free Communities Program, Florida Office of Drug Control, team members at the Louis de la Parte Florida Mental Health Institute (FMHI) at the University of South Florida published the Youth Suicide Prevention School-Based Guide (the Guide) in December, 2003. As part of the extensive research undertaking for the development of the Guide, the team reviewed numerous publications, many of which are included in the Annotated Bibliography I, available on the Guide webpage.

The coverage of the Annotated Bibliography I was limited to articles published before September, 2003 to allow time for revision before concurrent publication with the Youth Suicide Prevention School-based Guide. Thus, the Annotated Bibliography II includes scholarly articles focusing on youth suicide prevention and school-based prevention efforts published since the coverage end date of the Annotated Bibliography I. In addition, several articles published prior to September, 2003 are included as part of a subset of more intensive research designed to increase topical coverage of youth suicide prevention as related to culturally and linguistically diverse populations.

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The research process for the **Annotated Bibliography II** began with a return to the methods employed in the previous bibliography, including extensive searches of the following databases:

- Education Full Text
- LexisNexis
- Medline
- PsycINFO
- PubMed
- Wilson OmniFile, Full Text, Mega Edition
- Journals@OVID
- InfoTrac OneFile

Search terms included:

- Culture, cultural, acculturation, minority
- Hispanic American, African American, Black, Asian American
- Gay, lesbian, bisexual, transgendered, homosexual
- Youth, adolescent, teen, child, young adult
- School, school based, school-based, education, educational
- Suicide, suicidality, suicides, suicidal
- Prevention
- Intervention
- Postvention, survivor
- Risk, protective, warning
- Crisis
- Screening
- Program, programs, strategy

Criteria for inclusion:

- Topical coverage of culture as related to youth suicide prevention and school based programs
- Included frequently identified citations in selected articles
- Included as citations by other authors
- Written by noted experts in the field
- Included evaluations of suicide prevention programs
- Provided comprehensive information applicable to suicide prevention efforts

As an extension of the research upon which the Youth Suicide Prevention School-based Guide was developed, the Annotated Bibliography II contains information on school-based youth suicide prevention efforts and youth suicide prevention as related to culturally and linguistically diverse populations. It is hoped this updated annotated bibliography will serve as a resource for the Guide users in the areas of youth suicide prevention, school-based prevention programs, and related research.
**Reference List**

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**Signs of Suicide (SOS),** a school-based suicide prevention program, is designed to reduce suicidal behavior in adolescents by utilizing a two-part strategy of education and self-assessment. First, using a video and discussion guide, the educational component of the program is designed to increase students’ recognition and understanding of depressive symptoms in themselves and in their peers. This component provides training to increase adaptive behaviors toward suicidal ideation and depressive symptoms. In the self-assessment component, students are asked to complete the *Columbia Depression Schedule (CDS)*, a brief instrument derived from the *Diagnostic Interview Schedule for Children (DISC).* After completing the CDS, students are asked to score the instrument themselves, self-assess depressive symptoms and suicidal ideation, and prompts them to seek assistance when experiencing these problems.

Aseltine and DeMartino note that SOS is a relatively new approach, which, in addition to its use of multiple suicide prevention strategies, teaches that suicide is directly linked to mental illness and explicitly instructs that suicide is not a normal response to stress or emotional upset. Other advantages, as the authors note, are age-appropriate peer intervention strategies and ease of implementation in schools.

In this particular study, Aseltine and DeMartino seek to determine the short-term impact of the SOS program on knowledge of and attitudes about suicide and depressive symptoms, suicidal behavior, and help-seeking behaviors. The sample population includes 2,100 racially and economically diverse public high schools students in Hartford, CT and Columbus, GA. The randomized study collects posttest data from both experimental and control groups — respectively, those students who participated in the SOS program and those who did not. The questionnaire distributed to both experimental and control groups (those students who participated in the SOS program and those who had not, respectively) was designed to assess three categories of information: (1) knowledge of and attitudes about suicide measured through true/false questions, (2) suicide attempts and suicidal ideation assessed through a series of “yes” or “no” questions, and (3) help-seeking behavior measured through three “yes” or “no” questions.
After analysis of data obtained from the questionnaires, Aseltine and DeMartino report that students enrolled in the SOS program have significantly greater knowledge about depression and suicide, more adaptive behaviors towards these problems, and are 40% less likely to report a suicide attempt within the past three months. However, the researchers conclude that while the SOS program positively impacts students in these areas, the result of SOS on help-seeking behaviors is not significant. Additionally, the results yield data similar to past studies in regards to demographic differences. While female students are more likely to report suicidal ideation and suicide attempts, female students have greater knowledge and more adaptive behaviors in regards to depressive symptoms and suicide and report a greater likelihood of intervening with peers who may experience these problems. 

**English as a Second Language (ESL)** students have less knowledge about suicide and more reported attempts than native English speakers. While white students are more likely to have greater knowledge of suicide and depressive symptoms than racial minorities, black students have lower rates of self-reported suicidal ideation and suicide attempts, but are less likely to seek help when experiencing these problems.

After analysis of the data, Aseltine and MeMartino conclude that the short-term results of the SOS program are significant, impacting both knowledge of and attitudes about depressive symptoms and suicide, promoting adaptive behaviors, and reducing the reports of suicide attempts. The authors posit the SOS program’s emphasis on action and peer intervention is responsible for the reduction in reported suicide attempts and explains the insignificance of the program on reports of suicidal ideation. Perhaps most importantly, this study confirms that students are more likely to turn to their peers when facing emotional distress, confirming evidence gleaned from past studies that support this claim.

The authors identify the limitations of their study in terms of sample demographics and size, noting that more accurate generalizations may be made using a larger and more geographically diverse sample population. In addition, this particular study examines only short-term effects. The authors state that a longer-term examination is needed to measure the endurance of the effects of the SOS program on the reduction of suicidal behaviors.

To demonstrate the seriousness of the problem of youth suicide, Capuzzi references alarming statistics that clearly illustrate the need for further school-based prevention efforts. In order to increase these efforts, many state governments now require school staff and administration to participate in suicide education and training, develop programs aimed at prevention and intervention, and develop action plans for dealing with crisis situations.

Because children and adolescents spend such a great deal of their day in school and involved in school activities, suicide prevention programs are most pragmatically implemented in the school setting. Due to their availability and familiarity with youths, school personnel are necessary components of any school-based prevention effort. However, in dealing with youth suicide prevention and crisis response, staff members face a number of questions about how best to ethically prevent suicide and care for survivors while legally protecting themselves and their institutions. Capuzzi attempts to address some of these considerations through a synthesis of the best practices used in school-based suicide prevention programs, urging that schools must consider both their systems of ethics and their legal responsibilities.

Capuzzi discusses the ethical obligations of school personnel in dealing with a youth that has been identified as suicidal, the roles of faculty, staff, counselors, and crisis team members, relationships with youths’ guardians and referral to services, and legal liabilities of schools and school districts after an adolescent's attempted or completed suicide. In his discussion, Capuzzi attempts to outline the best practices currently implemented in schools.

After reviewing extant literature, the author concludes that while teachers and school personnel are expected to demonstrate a reasonable amount of care to ensure that students are kept safe, courts have been reluctant to hold teachers and school districts responsible for acts of self-harm. Suicide, included under the umbrella term of “school-violence” is often considered spontaneous. The author cautions, however, that this fact should not relieve school personnel of their responsibilities. There are more frequent legal cases whose rulings suggest that such acts are predictable, and therefore, actionable under some state laws. Capuzzi urges school personnel to protect themselves through training on issues surrounding youth suicide and through the implementation of youth suicide prevention programs.

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Many legal opinions state that unanticipated acts of violence in schools can be predicted, and thus, it is necessary for schools to develop prevention programs. Capuzzi suggests that a school counselor’s first step in the development and implementation of a suicide prevention program and crisis management strategies is being properly informed. School counselors must underpin the development of prevention programs with information about such important topics as cultural factors, suicide methods, risk factors, precipitants, myths, and profiles and behaviors of youth at risk for suicide in order to meet their legal and ethical obligations.

After gaining the proper background in youth suicide research, the school counselor must obtain the consent and support of school administration and staff. All school personnel must be actively involved in prevention measures to ensure the efficacy of the program. In addition, school personnel must be cautioned against attempting to provide counseling to youth, but rather, to aid in the identification of at-risk youth who should then be referred to the counselor.

The counselor must educate members of the school crisis team to participate in postvention and crisis management strategy training, in addition to training to bolster prevention efforts. Before implementing a prevention program or providing students with information about suicide and prevention efforts at the school, the school counselor must ensure that individual and group counseling services are available for youths who seek help for themselves or their peers. Capuzzi suggests that parents should be made aware of the steps schools take in the development of youth suicide prevention efforts within the school, and if possible, attend educational meetings to ensure that parents informational needs are met.

When planning and delivering classroom presentations to students regarding topics of youth suicide and prevention, Capuzzi warns that schools and school counselors must exercise extreme caution, as debates continue regarding the safety of such presentations. However, carefully planning and executing classroom suicide education is essential to providing students with information on how and where to obtain help for themselves or others. At the elementary school level, presentations should focus on resiliency training and development of communication skills rather than directly on suicide.
In the event of a crisis, the author states that a potentially suicidal youth must be “assessed, directed, monitored, and guided for the purpose of preventing an act of self-destruction.” Crisis team members and school counselors should stay calm and be supportive of the student while avoiding judgment. The individual should encourage the youth to self-disclose while making sure to avoid normalizing suicide as a choice. While it is important for the professional or crisis team member to listen actively and provide positive reinforcement, he or she should not attempt more in-depth counseling. During assessment of a potentially suicidal student, the professional should solicit the support and collaboration of another team member. During an assessment, professionals should assess the lethality of a student, after which team members should determine the potential suicidality of the student and refer the youth to the appropriate service agency. In the case a youth is considered at-risk for suicide, the students’ parents should be notified and if the situation warrants, protective services should be notified. In some cases, it may be necessary to consider hospitalization, particularly in cases where the student is assessed as high risk and parents are uncooperative. In nearly all cases, it is best that schools refuse an at-risk student’s return to school until they can be assured the student has been assessed by a counselor or other qualified professional.

After an adolescent has attempted or completed suicide, school counselors, crisis team members, and school personnel should remain aware of the event on the entire school “system.” Capuzzi presents guidelines for dealing with a crisis, which include organizing a phone network whereby school staff is notified of a meeting before school the following day. Teachers should be provided with an announcement to be read in each class to ensure that all students receive the same information, to confirm the loss, and to notify students of services available both within and outside of the school that will be available to them in the following days. Specific details about the family and the circumstances should be withheld so as to maintain confidentiality. Staff should be instructed to answer students’ questions as they arise, and excuse students who are upset to leave the class and spend time with a counselor or crisis team member. Parents and news media should be directed to an individual designated to answer questions and provide information regarding counseling options. Staff members should be aware that often times, grief is delayed, and thus, should be observant of students near the anniversary of a suicide.

Capuzzi warns against conducting a memorial service after a suicide as this may provide reinforcement to other students at risk for suicide, especially in postvention situations. However, students should be excused from school to participate in off-campus memorials or services. In addition, a member of the school staff should contact the family in the days following a suicide to offer assistance, as well as periodically in the weeks and months following the event.
This Morbidity and Mortality Weekly Report [MMWR] includes various topics concerning suicide in the hopes that new information regarding changing trends will provide information valuable to the development of suicide prevention efforts. The following youth suicide related topics are included (among others): “(1) trends in suicide by persons aged 10–19, (2) suicide attempts and physical fighting among high school students, (3) school-associated suicides, [and] (4) suicides among Hispanics.”


Data from the CDC's Web-based Injury Statistics Query and Reporting System [WISQARS] identifies suicide as the third leading cause of death among children and adolescents aged 10–19 in 2001. Among those in this age group, firearms were the most frequent method of completed suicide at 49%, followed by suffocation at 38%.

Researchers note that while the overall suicide rate decreased from 1992 to 2001, the methods of youth suicide completion had changed considerably. Summarizing data gathered from individuals residing in the US from 1992–2001, the researchers conclude that rates of suicide by firearm decreased while rates of suicide by suffocation increased. In 1997, suffocation surpassed firearms as the leading method of suicide among individuals in the U.S. aged 10–14.

The information gathered from WISQARS over the 10 year period was analyzed by age group and method for each year. For each of the different methods, the researchers examined data by age group and overall data to determine the rates of each method per 100,000 individuals. Finally, the rates of suicide by firearm and suicide by suffocation were analyzed as a means to assess changes in the two leading methods.

Data analysis concludes that in the 10–14 age group, the average decrease in firearm suicide rate was approximately 8.8% annually while the rate of suicide by suffocation increased an average of 5.1%.

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Suicide attempts and physical fighting among high school students — United States, 2001

Current research suggests that in adolescents, there is a relationship between violence against oneself and violence against others. In extreme forms of violence like school shootings, adolescent attackers often show signs of suicidal ideation both before and during the incidents. However, there may also be a link between suicidality and lesser types of school violence like engaging in fighting. A CDC analysis of data obtained from the 2001 Youth Risk Behavior Surveillance Summaries [YRBSS] proved that those students who had reported attempting suicide during the 12 months before the survey were also four times as likely to report having been in a fight than those who did not report a suicide attempt. In addition, 5.3% of all students who participated in the survey reported both a suicide attempt and participation in physical violence against another person.

The link between suicidal behavior and violence against others extends across gender, racial, and geographic boundaries, suggesting the link exists in multiple demographic populations. However, because interpersonal violence and suicidality share risk factors, the nature of the association between the two is unclear.

Because of these overlaps between multiple types of violence, both against oneself and against others, it follows that researchers call for further prevention efforts that seek to reduce both suicidal behavior as well as violent behavior toward others. Also, since the prevalence of the link between violence against the self and violence against others proved strongest in the ninth grade, researchers suggest that prevention efforts should commence before students begin high school.

School-associated suicide — United States, 1994–1999

Between July 1994 and June 1999, at least 126 students completed acts of homicide or suicide on public or private school grounds, traveling to or from school grounds, or en route or at a school-sponsored event. While there is extensive research on students who commit school-associated homicide, there are few studies on students who commit school-associated suicide. Many of these students exhibited potential indicators of suicidality, including social stress, substance abuse, and suicidal ideation.

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After data was collected from newspaper and broadcast news database searches, information about the 28 suicide victims was gathered from police reports and standardized interviews with police and school officials. Of the 28 students:

- 26 (93%) used firearms
- 22 were male
- 17 were involved in extracurricular activities
- 11 were reportedly weekly users of drugs or alcohol
- 10 expressed suicidal thoughts to a peer
- 5 were intoxicated at the time of their suicide

In addition, several of the students experienced stressors within the twelve months prior to their death by suicide, including romantic breakups, family moves or members of the household moving out, fighting with peers, and/or being bullied. This data suggests that school programs are needed to help identify and help students who experience stressors. In addition, the researchers call for further efforts to increase school staff’s opportunities for development and training in the area of suicide prevention.

**Suicide among Hispanics — United States, 1997–2001**

It is estimated that by the year 2020, Hispanics will comprise 17% of the United States population, surpassing all other racial/ethnic minorities. Although the rate of suicide per 100,000 is lower for Hispanics (5.6) than for the combined national rate (10.7), suicide is still the third leading cause of death among Hispanic individuals aged 10–24. In the prevention of suicide, the authors suggest that further efforts are needed to improve data collection, improve assessment methods for prevention strategies, and examine “how effective intervention can be modified for diverse and culturally specific populations.”

The researchers report that from 1997–2001, 8,744 Hispanics died by suicide, and of those, 85% were male. In addition, approximately 50% of these suicides were committed by those aged 10–34. Individuals of Mexican origin accounted for the highest percentage of total suicide (56%) and those of Cuban origin accounted for the lowest (8%).

Data from 1999–2001 shows that for Hispanic males, firearms (48%) were the most common method of suicide, followed by suffocation (35%), and poisoning (7%). For Hispanic females, suicide methods of firearms (29%), suffocation (29%), and poisoning (27%) were similar in frequency.

In the United States, Hispanic youths comprise the fastest growing population. These Hispanic youth have higher self-reported levels of sadness and hopelessness and experience a prevalence of risk factors. In response, the researchers call for improved data collection methods, the expansion of prevention efforts, and further analysis of the efficacy of interventions for culturally specific populations in order to meet the needs of the Hispanic population, ultimately reducing the number of suicides.

In response to the 1999 Surgeon General’s Call To Action to test the efficacy of youth suicide prevention programs, Eggert, Thompson, Randell and Pike, seek to determine the immediate postintervention efficacy of two programs, C-CARE (Counselors-CARE) and CAST (Coping and Support Training). The researchers compare C-CARE and CAST to “usual care” models for potential high school students at risk for dropping out and at risk for suicide. In brief, the three approaches are described as follows:

- The C-CARE program incorporates a one-on-one assessment interview, individual counseling, and social connections intervention with parents and/or school personnel, typically lasting three to four hours.
- The CAST program incorporates a one-on-one assessment interview, individual counseling, and social connections intervention similar to C-CARE, followed by 12 one hour small group counseling sessions designed to provide peer support and training in coping and life skills.
- “Usual care,” simulating a typical school intervention, is a brief 30 minute assessment interview and social connections intervention with parents and school personnel.

The authors hypothesize the effects of C-CARE and CAST are greater than “usual care” in decreasing suicide-risk behaviors, depression, and drug involvement. In addition, the researchers suggest the findings of this study will help to establish the level, or “dose,” of involvement/intervention needed to decrease risk behaviors in at-risk students.

C-CARE, CAST, and “usual care” share three common strategies: risk assessment/feedback strategies, crisis intervention, and social support intervention to facilitate communication between youths and caring adults such as parents or teachers. In addition, CAST includes two additional strategies: peer support and life skills training. Because CAST employs a higher “dose” of support and skills training, the researchers hypothesize that CAST is most effective, followed by C-CARE and “usual care” respectively.

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To test the efficacy of C-CARE and CAST against the “usual care” control, the researchers conducted a randomized trial study of 341 students, a representative sample of students from seven high schools, identified as at risk for dropping out and at risk for suicide. These students, 14–19 years old and in grades 9–12, were selected based on a two-step process. First, the researchers identified students at risk for dropping out based on factors such as academic performance, attendance, and prior drop out status. Those included in this pool were then invited to participate in the research study. After obtaining parental consent from those students who accepted, participants were asked to respond to a questionnaire containing the Suicide Risk Screen, an instrument which uses seven elements to identify youth at risk for suicide. Of the pool, those students who screened positive were randomly selected to participate in either one of two experimental groups, C-CARE or CAST, or the “usual care” control group (117, 103, and 121 students respectively).

Students in each of the programs, C-CARE, CAST, and “usual care,” responded to questions on a Likert scale designed to measure their level of suicide-risk behaviors, related risks, and protective factors at four time intervals over the span of nine months. However, it is important to note that the researchers include responses from only the first two and a half months in their data analysis.

As hypothesized, each of the three groups demonstrate less suicide risk behaviors over time, with declining levels of suicidal ideation, suicide threats, and attempts. However, students in both C-CARE and CAST programs evidence significantly less depression than “usual care” students, with CAST students demonstrating significantly less depressive symptoms. Similarly, students in all three programs showed declining levels of alcohol and hard-drug use, with the most significant levels of decline in C-CARE and CAST. These results suggest that the incorporation of peer support and life skills training into intervention programs is efficacious in the reduction of suicide risk behaviors in at-risk youth.

While the study concludes that each of the programs show varying efficacy in different components of risk assessment, the authors emphasize the value of school-based preventative interventions (in general) on at-risk students, citing declines in suicidal ideation, suicide attempts, and substance abuse.

Recent data from the Centers for Disease Control and Prevention indicate an increasing prevalence of suicidal behavior among African American and Latino Youth. While this information provides a national perspective, the researchers note that very little is known about suicidality among economically disadvantaged youth who reside in urban environments. Because inner-city adolescents face a number of challenges, they may be particularly at risk for suicidal behaviors.

The sample group included African American and Latino youth who participated in the Reach for Health (RFH) study. Data was collected over two consecutive years from 11th grade students who were previously enrolled in three public middle schools in economically disadvantaged areas of Brooklyn, New York. These areas had a statistically high prevalence of risks such as teen pregnancy, violence, and sexually transmitted disease.

The self-reported survey administered to the sample group included five items designed to assess suicidal behaviors, additional items to measure potential risk and resiliency factors, and items identifying sociological demographics. Survey data showed that overall, 15% of youth in the sample reported having seriously considered suicide within the previous year. Roughly the same percentage of students reported having told someone about their suicidal feelings or having considered suicide a solution. Females from the sample group were approximately twice as likely as males to have considered suicide as a solution or to have told another person that they were considering suicide. While males and females were equally likely to report having made a suicide plan, females were approximately twice as likely as males to report at least one suicide attempt.

Data shows that having needs unmet and same-gender sexual activity increase risk for suicidal ideation, while having lived in the same neighborhood for five or more years is a slight protective factor. In addition, family closeness is protective, while family composition has no effect on suicidal ideation. As expected, depression is linked to suicidal ideation. Coping style, ethnic identity formation, peer support, and school attachment have little effect, while religiosity is marginally protective.

Similar to data regarding suicidal ideation, ethnic identity formation, coping style, school attachment and peer support are not significant predictors of suicide attempts. Additionally, females and Hispanic individuals are twice as likely to attempt suicide as compared to African American individuals. Family closeness is protective and depression is a risk. Unlike ideation, having needs unmet is marginally significant and same-gender sex is not significant.
The researchers note that within the sample group of economically disadvantaged youth, there is a surprisingly small difference between percentages of youths who have seriously considered suicide and those who have attempted suicide. While data from this study suggests that a smaller percentage of economically disadvantaged youth consider suicide when compared to the national sample gathered from the Youth Risk Behavior Surveillance Survey, percentages of economically disadvantaged youth who attempt suicide are frighteningly higher than the national percentage. As a result of this data, suicide risk must be added to the list of health risks faced by youth in economically disadvantaged areas. Youth in the sample had very high levels of access to weapons. This is extremely disturbing in light of the established relationship between firearm access and youth suicide, coupled with the high prevalence of youth in the sample who have considered suicide and/or made a suicide attempt.

Previously held notions regarding both ethnic identity formation and coping style as being protective factors must be revisited, as data from this study does not support those claims. Strong ties to neighborhoods and communities are more consequential as protective factors than ethnic identity, as evidenced by results that suggest having lived in the same neighborhood for five years or more as a protective factor for minority youth. Additionally, it is important to note that family closeness is a significant predictor of suicidal ideation and attempts, whereas the actual family composition is not significant.

Same-gender sex, although reported by only 4% of participants, appears to be a serious risk factor for suicidal ideation and suicide attempts. The researchers posit the strong link between this factor and suicide risk may be due in part to the perception, especially among African American and Latino men, that homosexuality is not accepted within their communities.

The researchers conclude with a call for vigilance in recognizing and responding to suicidality in minority youth. Because of the influence of family support, the researchers ask for increased attention to the ways in which families in economically disadvantaged areas can be urged to address these issues.

The author cites numerous studies suggesting that Hispanic youths are at a higher risk for suicidality than African American and White youths. In further review of existing studies, Olvera highlights Guiao and Esparza's model in describing overall suicidality based on established risk factors, including depressive symptoms, lack of coping skills, family related stressors, and overall stress level. Olvera suggests that a similar model may be particularly effective in examining factors that contribute to suicidal ideation in minority youths such as depressive symptoms, lack of coping skills, family problems, and the additional "acculturative stress" (Hovey & King, 1996) individuals experience in contact with the majority culture.

Olvera distributed questionnaires to 158 students in grades 6–8 at a multi-ethnic middle school, comprised 56% Hispanic, 21% non-Hispanic White, 14% mixed ancestry, and 1% African American students. The questionnaire was designed to focus on three factors that contribute to overall suicidality: depression, coping strategies, and family dysfunction. Additionally, certain questions regarding language preference and immigration status were designed to determine students' level of acculturation. Olvera is careful to note that this method is based on self-report, and thus, can only be an approximation of psychopathology. In addition to self-report, the small sample size, low response rate, and generality of questions suggest the conclusions of this study should be considered with caution.

As Olvera expects, scores reveal that minority adolescents experience higher levels of depressive symptoms, more instances of family problems, and lack coping skills as compared to Anglo peers. Controlled for age, gender, and perceived socioeconomic status, Olvera determines both mixed ancestry and Hispanic youths maintain significantly elevated ratios of suicidal ideation. This study supports that while Hispanic and mixed-ancestry adolescents share many demographic parameters, multiracial adolescents may experience additional stressors such as lack of identification with a singular ethnic group, mixed feelings about personal heritage, devaluing of a particular culture, and a lack of empathy from parents. Olvera suggests that while mixed-ancestry and minority adolescents may both experience discrimination and problems regarding identity, mixed-ancestry adolescents may not feel a sense of belonging with a singular ethnic group like some minority youths.

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During adolescence, individuals of minority and mixed-ancestry cultures may not yet have developed the skills necessary to deal with the challenges caused by cultural differences, negative feelings towards their own ethnic group, and family expectations that differ from those of the majority culture. Even when a minority group is well represented in a particular area, individuals may have high levels of suicidal ideation. Because of this, Olvera suggests that ethnicity influences youths’ sense of well-being, and thus, should be considered as an important component of a mental health assessment.

In addition, this study finds only minimal difference in measures of individuals’ reported family problems and depressive symptoms across ethnicities, suggesting these two factors are not significantly effected by race or ethnicity. As supported by previous studies, Olvera suggests these are important predictors of suicidal ideation across racial and ethnic boundaries.
At the center of many adolescents’ lives, schools are in a unique position to identify at-risk adolescents, and thus, are responsible for developing suicide prevention strategies. Schools have a number of choices to consider in the development and implementation of plans aimed at decreasing the number of youth suicides. In this article, Potter and Stone review several established principles of youth suicide prevention, describe a number of strategies, and outline recommendations for school-based efforts.

The public health approach, “a multi-disciplinary, scientific method of identifying effective strategies for prevention,” directs individuals to first assess the problem at hand, identify the causes, develop and test the efficacy of interventions, and finally, implement interventions. Like other epidemics, government agencies and other organizations have sought to affect risk-behavior and decrease the number of incidents using this approach. By its very nature, the improvement of public health must be a community effort.

The public health approach incorporates both the high risk approach (targeted at individuals) and the population approach (directed at the social and environmental factors which effect populations). In order to develop successful suicide prevention programs, Potter and Stone recommend that schools utilize multiple methods.

In their review of elements of suicide prevention, the authors first present preventative interventions, a high risk approach to prevention aimed at breaking relationships between causes of unwanted outcomes and the achievement of those outcomes. The authors caution that preventative interventions are too often implemented without a careful analysis of the ways in which intervention will affect causal relationships and eventual outcomes. Interventions can be implemented in a number of ways, involving single individuals, groups, peers, families, and/or entire communities.

The authors caution that regardless of the prevention approaches that schools choose to implement, they must develop a detailed plan for dealing with a student potentially at risk for suicide and for responding after a suicide occurs. There are a number of programmatic strategies that schools may incorporate into their plans, including both high risk and population approaches. Gatekeeper training asks school staff to identify and refer students who may be at risk for suicidality. In addition, this approach involves teaching staff members the proper means of response in a crisis situation. The use of gatekeeper training rests on the assumptions that services are available to which students may be referred, and that students who may be at risk have contact with those staff members who have undergone training.
Suicide prevention education is an approach that teaches students about suicide, warning signs, how to seek help for themselves or peers, and often includes components aimed at the development of self-esteem and social competency. While these programs can be utilized to reach large numbers of individuals with limited durations of exposure, the authors note that past studies indicate this approach increases students' knowledge about suicide, positive attitudes, and willingness to seek help.

Screening programs, generally administered with the aid of a questionnaire or other screening instrument, are used to identify those students who may be at-risk in order to provide further screening and treatment. Screening instruments are designed to assess underlying factors that have been linked to suicidality such as behaviors, symptoms, and depression. However, the authors caution that not all persons who attempt suicide demonstrate prior depressive symptoms, and similarly, not all persons with depression or psychiatric disorders will attempt suicide. While the American Academy of Pediatrics (AAP) recommends that suicide screening be included with regular health assessments, the authors state that any school using mental health screening as a component of suicide prevention efforts should be prepared to provide services to those who are identified during the screening process. Thus, coordination between schools, communities, and health services is essential for success.

Peer support programs, both in and out of school, are designed to promote peer relationships and social competency in high-risk adolescents, allowing them to receive support from peers. Perhaps one of the most evaluated peer support programs is Reconnecting Youth, an effort which incorporates social support and life skills training in daily classes designed to “enhance self-esteem, decision-making, personal control, and interpersonal communication; social activities and school bonding, to establish drug-free social activities and friendships, as well as improve a teenager's relationship to school; and a school system crisis response plan, for addressing suicide prevention approaches.”

Crisis centers and hotlines are staffed by paid individuals and volunteers who provide counseling over the telephone and offer other services to suicidal individuals. Some of these programs allow individuals to “drop-in” for crisis counseling and referral services. The success of crisis centers and hotlines rest on the assumption that suicide is often an impulsive decision, and thus, programs are in place to keep the individual from self-harm until the immediate crisis has passed. While studies show that hotlines may reduce suicide rates for young women (at lower risk than young men), programs like these may improve their effectiveness by increasing outreach toward males.
Certain efforts are directed at restricting individuals’ access to lethal means such as firearms, drugs, and other common methods of suicide. Because studies show that impulsiveness and ambivalence are factors in youths’ suicidal behavior, the restriction of the means through which to attempt or die by suicide may be efficacious. While restriction is often a controversial issue, especially in the case of handguns, efforts to educate parents about risk-factors associated with access to lethal means may be one way that schools can employ this strategy.

Interventions after a suicide are aimed at friends and family of an individual who has committed suicide in an effort to prevent suicide clusters and provide support for effective coping after crisis. These efforts should be made part of a school’s crisis response plan in order to identify those individuals who are affected most and provide appropriate services.

Family education and involvement stresses the importance of parents and adult caregivers in the development and implementation of a suicide prevention program. These adults are closest to youths and may be best able to identify risk-factors, warning signs, and mood disorders.

While the authors caution that the lack of scientific evidence is insufficient to recommend a single strategy. However, they offer several recommendations about school suicide prevention:

“School health education should include training for students on:
• Identifying troublesome feelings
• Sources of help for troublesome feelings
• Identifying possible signs or symptoms of depression
• Strategies for preventing and dealing with depression
• Sources of help for depression
• Potential signs and symptoms of depression and troublesome feelings”

“Schools should:
• Provide training for teachers and staff to help identify students with depression or exhibition of pre-suicidal behaviors
• Establish a mechanism of identification and referral of pre-suicidal students
• Train parents to help them identify when their children are experiencing depression and/or are exhibiting pre-suicidal behaviors
• Designate a staff person to coordinate programs for youth who are depressed
• Develop a plan to respond to suicide among students; that plan should reflect best practices regarding prevention of subsequent or cluster suicide
• Avoid reliance on only one program or strategy”
Regardless of the strategies employed in the development and implementation of a suicide prevention program, evaluation is vital to ensuring success. The ease of evaluation is directly dependent on effort placed in development and implementation of the program. Evaluation can improve the delivery of services, aid in the assessment of goals and achievement, suggest modifications, and improve the morale of program personnel. In addition, those programs which are able to demonstrate efficacy are more likely to gain support.

While one or more of the strategies discussed in the article may be most efficacious for a particular school, Potter and Stone conclude with a recommendation that schools address the most severe aspects of the problem, and then continue to develop comprehensive plans and strategies designed to reduce the number of attempted and completed youth suicides.
Past studies designed to assess the relationship between youths' sexual minority status and suicide risk have been conflicting. Certain studies indicating sexual minority status as a key risk factor for suicide were widely criticized for their lack of control group and opportunistic, non-representative sample population. However, questionable the results of such studies were, they issued in a new age of research with many inherent problematic methodological factors. Russell begins with a review of past studies, pointing out those areas that have proved challenging to researchers. Russell closes with an examination of the present state of research in the area of sexual minority youth and suicide risk, offering recommendations for future studies.

Past studies in this area have presented three major methodological challenges: “identifying sample populations, measuring adolescent sexual orientation, and measuring suicide risk.” First, the identification of sample populations has proved problematic due to the low prevalence, behavior, and/or identification of same-sex orientation, thus making large population based generalizations difficult and unreliable. In order to address this, several instruments designed to evaluate general health and risk factors have begun to include items that ask respondents to provide information regarding sexual minority status. However, results of recent instruments show that a large percentage of sexual minority youth identify as bisexual, a group that may be largely different than self-identified gay and lesbian youth. Thus, determining specific sample groups of gay and lesbian youth is perhaps now more difficult than ever before.

Second, researchers have been challenged by the means through which to measure sexual minority status in youths. In past studies, this issue has proved difficult due to sample groups that are highly marginalized and often hidden. In more recent years, our understanding of minority sexual status has broadened to include more than same-sex sexual orientation. More recent studies have defined sexual minority status as same-sex sexual identity, contact, romantic attraction or relationships, and both sex romantic attraction and relationships. Regardless of the definitions particular past studies have used to classify sexual minority youth, most have stated that this population is at greater risk for suicide than non-sexual minority youth. Russell calls for studies that include three important dimensions of sexual minority status: “sexual behavior, orientation, and identity.”

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Lastly, Russell identifies measurements of suicide risk as a challenge that has affected past studies. Most of the existing studies measure suicide risk based on self-reported endorsements of factors such as suicidal thoughts, intent, attempts, plans, and the number and severity of attempts. While there are numerous issues at hand in the measurement of suicide risk, Russell cautions that most studies using representative samples are based on single-item indicators, and thus, their validity is questionable. In fact, there are no existing studies that link deaths by suicide with sexual-minority status. The difficulty in measurement may be due in part to the overlapping risk factors that face sexual minority youth. The process of coming to terms with same-sex sexuality is generally a stressful process that may include suppression of feelings and denial. One recent study showed that suicide attempts in sexual minority youth preceded disclosure of their sexuality to others. Another study challenges the validity of generalizations about sexual minority youth and suicide risk, citing that past studies have not assessed the severity of suicide attempts, and concludes that while sexual minority youth are at no greater risk, instances of suicide attempts in this population are over-reported and often exaggerated.

Because many past studies suggest that sexual minority youth are at greater risk for suicide, it is necessary to examine the factors that may contribute to this. Past studies report that these youths are often in “compromised family relationships and hostile school and peer environments.” Because adolescence is typically a period of increased stress, the lack of support and hostility that sexual minority youth may experience add to levels of emotional distress. In general, adolescent risk factors for suicide include depression, substance abuse, the suicide of a friend or family member, or recent conflict with parents. Published studies suggest that sexual minority youth experience high levels of each of these risk factors. Increased frequencies of victimization and “minority stress” further contribute to stressors precipitated by adolescent social and emotional development.

Russell suggests that the first step in improving prevention efforts for sexual minority youths is attention to same-sex sexuality within suicide prevention programs. While in recent years, educators and health services personnel have incorporated strategies for supporting sexual minority youth, studies suggest that these individuals are unable to provide care appropriate to the unique situations of sexual minority students. However, certain studies suggest that when educators are supportive of sexual minority issues, sexual minority youth are at a lower risk for suicide. Evidence suggests that greater accessibility to health care, peer support programs, and education networks work together to improve self-esteem and promote sexual health. Although there is no evidence regarding the efficacy of youth suicide prevention programs aimed specifically at sexual minority youth, the best available research suggests that prevention efforts should include peer support and focus on the development of coping strategies to deal with stress and stigma.
Russell reminds that the typical difficulties that adolescents experience in the developmental process may be somewhat heightened for sexual minority youths. As such, sexual minority status may be considered one of the multiple stressful transitions youths experience. However, undergoing these changes and developing same-sex awareness is further complicated by a culture that is hostile and prejudiced toward sexual minorities, resulting in increased negative consequences on mental health. Russell calls researchers to better their understanding of the factors that shape the experience of sexual minority youth and the causal relationships between these factors and development. In recent years, researchers have taken an increased interest in the role of educational environments and school policy in the way they affect the lives of sexual minority youth. There are few studies, however, regarding the influence of family, and no studies on the affects religious and/or youth organizations on sexual minority youth. In response, Russell calls for further study on the relationship between suicide risk and sexual minority status in youth in order to determine factors that promote positive development and decrease suicide risk.

The researchers cite past studies confirming that in most cases, adolescent suicide is accompanied by a treatable, yet unrecognized, mental illness. As such, the researchers note the importance of including assessment of untreated mood disorders in adolescent suicide screenings. While there are several instruments designed to assess suicide risk, the researchers note that none seek to validate results against high risk as determined through reliable structured diagnostic interview.

In response, the researchers seek validate the results of an instrument designed to assess the most important risk factors for suicide against results obtained through structured interview. In particular, the researchers compare the results obtained through the Columbia SuicideScreen (CSS) to the widely used Beck Depression Inventory (BDI).

The Columbia SuicideScreen is a self-report questionnaire that includes 11 items designed to assess suicide risk through any one of the following: possible endorsement of suicidal ideation within the past three months, any prior suicide attempt, or negative mood. To avoid a focus on suicidality, the questions designed to assess suicide risk are embedded within a set of 36 general wellness, social concerns, and family issues questions. The Beck Depression Inventory is a self-report inventory that includes 21 items designed to assess various aspects of depression.

To collect the necessary data for the study, the researchers identified a convenience sample of students in grades 9–12 from seven high schools in the greater metropolitan New York area. The final 1729 students in the sample group self-responded to a questionnaire that included prompts from both the CSS and BDI embedded with a set of general wellness questions. Students who endorsed risk items on the CSS (suicidal ideation, suicide attempt, depression, and excess substance abuse) were given the Diagnostic Interview Schedule for Children (DISC). The DISC is a well-validated self-response instrument, administered by lay-interviewers, which is designed to identify probable psychiatric disorders in youths aged 6–17. For this particular study, however, respondents were given only a portion of the prompts generally administered through the DISC; those questions that deal with depression, alcohol and substance use, and anxiety. As students participated in the DISC interviews, the researchers developed a demographic profile of screen positive students (356 in all) which was group matched by age, gender, and ethnicity to 285 students who were not identified as screen positive.
The researchers state that the CSS compares favorably to the BDI, perhaps due in part to its asking participants to consider a longer time frame and inclusion of specific prompts regarding suicidal ideation and suicide attempts. After the collection of data, the researchers discovered that as with other instruments designed to assess suicide risk, the CSS has the potential for high sensitivity at the risk of specificity. While the specificity is of the CSS is relatively high in comparison to other instruments, it is the recommendation of the researchers that the CSS be utilized as part of a two-part procedure for suicide-risk to ensure validity.

The researchers posit that any suicide risk screening program must balance sensitivity with specificity to ensure that neither potential screen-positive individuals are not missed nor that screening results include a high number of false-positives. Additionally, the researchers note the limitations of their study, including sample selection by convenience, lower than average participation rates, absentee students, included outliers, and sample sizes too small to produce generalizations about differentiations by ethnicity.
In the United States, educational institutions have served as the primary location of child and adolescent socialization, educating individuals into accepted behaviors for meaningful integration into productive society. In the past several decades, however, this model has been drastically altered by increasing occurrences of various forms of school violence as evidenced by incidents in Jonesboro, Columbine, and others. More than ever before, American students across social, economic, and cultural lines are involved in disturbing acts of violence against others and participate in self-harming behaviors.

As Speaker and Petersen point out, there are several intersections between school violence and instances of youth suicide. While there are programs designed to combat the increase in school violence and youth suicide, the authors suggest these methods are somewhat fragmented, reactive rather than proactive, and often lack the funding necessary to ensure efficacy. In some cases, schools have no suicide prevention program in place and no postvention plan. As the authors suggest, this is perhaps due in part to the lack of empirical evidence that would confirm the success of such programs in the prevention of school violence and youth suicide. However, a review of the available literature points to similarities in proactive models aimed at the remediation of elementary school violence and effective suicide prevention programs.

Speaker and Petersen present a model based on the results of a study designed to identify the perceptions of school personnel in 15 school districts in 12 states regarding the causes, frequencies, and changing populations of school related acts of violence. Based on the responses of teachers, site administrators, and district administrators, the authors compiled a list of five factors identified by school personnel seen as contributing most to school violence: “(1) a decline in the family structure; (2) a lack of school resources or skill to deal with violence; (3) the breakdown in moral/ethical education of youth; (4) family violence combined with drug-related factors; and (5) violence in the media.”

In response to these five factors, Speaker and Petersen offer a five “pillar” model that addresses each factor proactively. Additionally, the authors emphasize the importance of intervention at the elementary school level based on numerous studies that provide evidence to suggest the greatest elevation in the frequency of violence is at the preschool/elementary level. Further, the authors cite past studies that bear evidence of the efficacy of programs targeted at preschool/elementary school aged children.
As the first, and perhaps most important pillar in their proposed prevention model, the authors suggest that family inclusion is a vital component of successful programs aimed at the reduction of school violence and preventing youth suicide. In addition to educating youths, schools should provide families with support in an effort to meet the needs presented by stressors within the home.

As the second of the five pillars, the authors posit that school personnel must develop new skills within the school and community. These skills demand that teachers not only engage in traditional pedagogical training, but also implement social and ethical skills curriculum and serve as models of these skills.

Third, schools must emphasize individual responsibility in both youths and families as a means to increased feelings of success and self-worth. The perception of a successful identity is a component in the development of effective coping strategies that enable youth to deal with life stressors, and thus is an important deterrent to youth suicide and violence.

Fourth, the authors suggest that schools should develop a flexible conflict mediation model that is integrated into daily curriculum aimed at improving communication, negotiation, and problem-solving skills. As the last of the five pillars, Speaker and Petersen suggest that schools recognize the mutually affecting relationship between media and school violence. As such, school personnel must be equipped to deal with the influence of media violence on children and adolescents. As part of this pillar, the authors emphasize that students must be educated in media and visual literacy in order to aid in the critical evaluation of violence as depicted in the media and the minimize the harmful impact of such images in students’ lives.

Speaker and Petersen note that this five pillar model is by no means conclusive. As such, they call for further research and evaluation of the efficacy of programs designed to combat school violence and youth suicide, and also urge continued commitment from school personnel.

Stuart, Waalen, & Haelstromm discuss the conflicting views regarding the efficacy of school-based suicide prevention programs in recent literature. While many authors have addressed the issue, there is little consensus as to the success of school-based prevention efforts. In addition to conflicting claims, Stuart, Waalen, & Haelstromm also point to the lack of evidence regarding the efficacy of adolescent gatekeeper training and peer helping as specific components of school-based prevention efforts.

Supporters argue that gatekeeper training is a natural addition to peer helping programs. While many adolescents report knowing a peer who has attempted suicide, only a small percentage of these individuals had informed an adult of the situation. Because peers have greater access to fellow students who experience suicidal feelings, supporters believe that gatekeeper training and suicide awareness training should be incorporated into existing peer helping programs.

A study by Kalafat & Elias (1994) offered evidence to suggest that schools should incorporate suicide awareness training into their existing prevention efforts. According to their results, adolescents who participated in suicide intervention classes gained greater understanding and knowledge about suicide and developed more positive attitudes about peer intervention. However, Stuart, Waalen, & Haelstromm note that the assessment measures used in Kalafat & Elias’ study failed to address specific topics included in the particular training programs, and thus, the results were overly generalized.

In response to the lack of direct evidence and the limitations of previous research, the authors seek to determine the efficacy of gatekeeper training through the measurement of student gains in specific topics presented in training classes. The authors’ objectives include identifying differences in adolescents’ skills, knowledge, and attitudes regarding suicide and peer intervention both before and after training. In addition, the assessment instrument would include the portions of the *Suicide Intervention Response Inventory* (SIRI-II) in order to examine its use with adolescents. Specifically, the authors hypothesized that after training (1) adolescents knowledge about suicide would increase (2) adolescents positive attitudes about intervention would increase, and (3) both suicide assessment and listening skills would become more like those of expert helpers. The authors also conjectured that all three changes would be maintained over time.
The sample group included adolescents from five schools in British Columbia, Canada, with existing youth suicide prevention efforts coordinated through Canada’s Suicide Prevention Information and Resource Center (SPIRC). During two half-day sessions held one week apart and a follow up session three months later, the coordinator of SPIRC delivered training to students in the following areas: *(a)* active listening skills, *(b)* self care and setting limits, *(c)* crisis theory, *(d)* signals of suicide, *(e)* suicide risk assessment, *(f)* role-play scenarios involving suicidal youth, and *(g)* community resources.*

To measure changes in the specific topics covered in training sessions, the gatekeeper trainer (who delivered training) selected the most relevant items from three instruments used in previous studies for inclusion on the questionnaire: the SIRI-II, the Suicide Intervention Questionnaire (SIQ), and a true/false assessment regularly administered by the SPIRC. Fifteen questions were selected from the SIRI-II, an instrument that asks individuals to rate/score the appropriateness of two possible responses to a hypothetical scenario. The individual’s score is then subtracted from the average score of an expert panel. Students were also asked to provide unstructured responses to SIRI-II scenarios for qualitative assessment. The questionnaire was administered to participants three times; before training, immediately following, and three months later.

After analyzing data obtained from the questionnaires, the authors conclude that knowledge, skill, and positive attitudes about suicide awareness had increased significantly after training and were maintained three months later. Additionally, based on qualitative assessment of students’ unstructured responses to SIRI-II scenarios, the authors conclude that students were more capable of inquiring into a peer’s suicidal ideation after training. As a skill, reflection of feelings improved post-training, while other skills changed little over the course of three questionnaire administrations. Results of students’ scores on items included from the SIRI-II showed significant improvement in certain skills through repeated administration, with students’ scores becoming more like that of experts.

This evidence suggests that training in specific skills and knowledge about suicide awareness and intervention are necessary, it is important to note the study’s limitations, which include the lack of control group and small sample group. The sample group included 65 students who participated in the training sessions, and results were based on only 37 who completed all three questionnaires. Also, the authors acknowledge the study’s inability to assess the application of knowledge, skills, and attitudes in authentic situations. To improve future assessments, the authors suggest that studies should assess the transference of knowledge, skills, and positive attitudes to natural environments by tracking the number of referrals made that are directly connected to peer helping efforts.

In the policy statement on school-based mental health services from the American Academy of Pediatrics (AAP), Taras and Young illustrate the severity of youth mental health issues in order to underscore the necessity for effective school-based mental health services. Many extant studies indicate that multiple factors negatively impact youths' mental health, including youths' engagement in risk behaviors such as substance abuse, violence toward others, and suicide attempts.

Research suggests that while many students are in need of mental health intervention, few receive appropriate care. In order to reach those students in need, the authors recommend that service providers address the particular barriers that affect youths' access to mental health services such as inadequate finances, stigmatization, a lack of mental health professionals, and insufficient mental health training for pediatricians. To overcome these difficulties, pediatricians, mental health agencies, and schools must work collaboratively to develop prevention programs and intervention strategies.

The authors categorize the approaches to various audiences and services provided by school-based mental health using a three-tiered model. In the first tier, school-wide prevention efforts are used to decrease risk factors and improve resiliency through provision of services to students and families, the improvement of school environment, and the development of students' connection to schools. At the second tier, mental health services are targeted at those students with an identified mental health need, yet still function with relative success in the school environment. This tier includes the provision of individual/group therapy and specific elements designed to meet the needs of students with learning and behavioral problems. At the third tier, mental health services are target at those students with severe mental health problems. This tier uses a multiple services approach offer including school-based special education programs, services from social agencies, and family therapy.

The provision of various levels of school-based mental health services has many advantages: students and their families may feel less stigmatization in obtaining school-based mental health services, the convenient location may enable increased participation, and the location within the school may improve the accuracy of diagnoses and progress assessment. To help realize these benefits, schools may choose from a number of different service delivery models that integrate varying levels of school involvement with mental health personnel and services. The authors present three models (which are not mutually exclusive): school-supported mental health models, community connections models, and comprehensive/integrated models.
The authors also make several recommendations in response to the possible challenges school-based mental health programs face. First, in order to avoid duplication or neglect of services, school-based mental health programs involving multiple professionals and/or agencies must be coordinated. Second, programs must be integrated into the school environment to promote mental health service as an essential component of the educational system. Third, because parents are a central component in youths’ mental health, school personnel must find methods of incorporating parents’ involvement into services. Last, school personnel must ensure the confidentiality of student and family mental health care (except in circumstances where an individual is at risk of harming herself/himself or others), while enabling communication regarding various areas of a student’s education and socialization.

The authors conclude the policy statement with a list of recommendations for schools and a list of recommendations for pediatricians and primary care personnel, including various considerations for prevention, training, school environment, coordination, and community resources among many others.
Introduction

According to the National Center for Health Statistics, youth suicide accounts for more deaths in the United States than all natural causes combined among 15–24 year-olds (1). Other alarming statistics include:

- everyday, 3,500 adolescents attempt suicide and 35 of them die (2),
- every two hours an average of one child, under the age of 15, dies by suicide (3),
- more teenagers die by suicide than die from cancer, AIDS, birth defects, stroke, pneumonia, influenza and chronic lung disease combined (4),
- approximately 1 million teenagers will attempt suicide, of whom almost 700,000 will receive medical attention for the attempt (5).

These statistics are even more terrifying when one considers that adolescent suicide and suicide in general, is often under-reported and a potentially significant number of suicides are mistakenly reported as accidents or homicides, thereby underestimating the true incidence of suicide. Adolescent suicide is a very real and an extremely serious public health problem in the United States and one which needs to be addressed in the community, family, and particularly in the school.

Schools are ideal settings to address the topic of suicide and attempt to prevent adolescent suicide because the school provides an environment capable of reaching the largest number of students and therefore represents the highest likelihood that a student potentially at risk for suicidal behavior will be exposed to a prevention strategy (6). This review provides a succinct overview and synthesis of literature examining disseminating information about adolescent suicide, school climate, risk factors, protective factors, warning signs, prevention strategies, intervention strategies, and strategies for responding to a death by suicide.

Suggested Citation: Lazear, K., Roggenbaum, S., & Blase, K. (2003). Youth suicide prevention school-based guide—Literature Review (12/9/03). Tampa, FL: Department of Child and Family Studies, Division of State and Local Support, Louis de la Parte Florida Mental Health Institute, University of South Florida. (FMHI Series Publication #219-Rv)

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Disseminating Information

It is essential that administrators disseminate current information about adolescent suicide such as risk factors, referral practices, and what to do when faced with a student potentially at-risk for suicide, to all staff that are generally in a convenient location for helping troubled teens.

Research has shown that teachers are inadequately trained on information surrounding adolescent suicide and that most schools do not have a training program in place to inform staff and faculty about adolescent suicide (8,10). This lack of training, designed to inform and educate, is troubling when considering the results from a study found that over 25% of teachers who were surveyed about adolescent suicide reported that they had been approached by teens who were at-risk for suicide (11). Training faculty and staff is universally advocated and supported by research as an essential and effective component to a suicide prevention program (15–21).

Research suggests that training faculty and staff to develop the knowledge, attitudes, and skills to identify students who may be at-risk for suicide and make referrals when necessary can produce positive effects on an educator’s knowledge, attitude, referral practices (21–25). Similar information should be presented to parents, which studies have shown is an essential component of suicide prevention programs (12,26). It is also important that information provided to parents include a brief discussion about how to limit access to the tools used for suicide such as gun restriction strategies (9,12–14).

Research has found that a brief one hour and thirty minute presentation should be sufficient for educating parents about adolescent suicide (12).

- Has been reviewed by national experts in suicide prevention, behavioral and physical health providers, and community-based school personnel, advocates, families and youth. The Guide, annotated bibliography, and literature review will be available on a University of South Florida’s website.

The first issue brief in this series is designed to assist in debunking myths that may serve as barriers to implementation of a school-based suicide prevention program. Countering myths with reality and evidence-based statements may enhance confidence and willingness to address youth suicide prevention.

The remaining briefs each cover individual topics related to suicide prevention that are especially pertinent to school administrators and their community partners.
**Literature Review** continued

### School Climate

Healthy, supportive and informed schools can do much to prevent youth suicide, to identify students at risk and to direct youth to prompt, effective treatment. Research has shown that schools that enhance a student’s feeling of connectedness to their school (e.g., felt teachers treated them fairly, felt close to people at school, felt like a part of their school) can greatly impact the likelihood of adolescent suicide since students who feel a connection to school are less likely to experience suicidal thoughts, experience emotional distress, and are less likely to drink alcohol, carry weapons, or engage in other delinquent behavior (26-29).

Research suggests that a healthy school climate is one that involves students in school decisions and allows students to participate in school activities (26,27,31,34,35). By involving students, schools can cultivate a healthier, more productive, and more academically proficient student body (26,30-33). Schools need to be aware of the environment that they provide for students and the potential impact that the environment may play in the prevention of adolescent suicide. Recently research has found that creating a safe environment by recognizing and discouraging bullying can have a positive impact on adolescent suicide since students who feel victimized by other students or staff have an elevated risk of suicidal ideations and behaviors (36-38). Research has also shown that students who get bullied are also the same students who may be potentially at a higher risk for suicidal behaviors: those that “don’t fit in” (39,40), those perceived as homosexual, bisexual, or trans-gendered (41-43), those who are socially isolated or lack social skills (44), and those that differ from the majority of their classmates in regards to race, religion, or ethnicity (27).

### Risk Factors

Although suicide is an extremely complex interaction involving a number of factors that all contribute to the expression of suicidal behaviors, research suggests that there may be some factors that increase and/or decrease an adolescents likelihood of engaging in suicidal behavior. Some factors, called risk factors, have been identified as potentially increasing the likelihood that an adolescent will engage in suicidal behavior. Potential risk factors include:

- previous suicide attempt or gesture (9,29,45,46,48,49);
- mood disorder or psychopathology (9,29,46-49);
- substance abuse disorder (9,29,46-49);
- family history of suicidal behavior or mental illness (9,47,49);
- relationship, social, work, or financial loss (9,47,49,50);
- access to firearms (9,47,49,50);
- contagion or exposure to individuals who have attempted or completed suicide with exposure through media television, and direct contact (7,47,49);
- history of physical or sexual abuse (45,46,49);
- conduct disorder (46,49);
- juvenile delinquency (46,49);
- sexual orientation, which has been shown to be correlated with identified risk factors for suicide and is less of a factor after controlling for these risk factors (9,29,47,49);
- stressful life events (46,49);
- chronic physical illness (9,29,47);
- impulsive or aggressive tendencies (9,50);
- living alone/runaways (46,49); and
- school problems (29).
Literature Review continued

Protective Factors

Research has also identified factors (protective factors) that may decrease the likelihood suicidal behavior in an adolescent. Potential protective factors include:

- parental/family support and connectedness (7,9,29,33,46),
- good social/coping skills (7,33),
- religious/cultural beliefs (7,9,29,33),
- good relationships with other school youth/best friends (33,46),
- lack of access to means (7,49),
- support from relevant adults/teachers/professionals (7,33,46),
- help-seeking behavior/advice seeking (33), impulse control (46),
- adaptive problem solving/conflict resolution abilities (7),
- social integration/opportunities to participate (33,46),
- positive sense of worth/confidence (33,46),
- stable environment (46),
- access to and care for mental/physical/substance disorders (7),
- responsibility for others/pets (46), and
- perceived connectedness to school (29).

Warning Signs

Research also suggests that adolescents potentially at risk for suicidal behavior may exhibit warning signs before engaging in suicidal behavior. Research suggests the following signs as potential indicators for suicidal behaviors:

- withdrawal from friends and family,
- preoccupation with death,
- marked personality change and serious mood changes persisting for more than two weeks,
- difficulty concentrating,
- difficulties in school (decline in quality of work),
- change in eating and sleeping habits,
- loss of interest in pleasurable activities,
- frequent complaints about physical symptoms, often related to emotions, such as stomachaches, headaches, fatigue, etc.,
- not tolerating praise or rewards,
- persistent boredom, loss of interest in things one cares about (31,51-54).

An adolescent potentially at risk may also complain of being a bad person or feeling “rotten inside”; make statements about hopelessness, helplessness, or worthlessness; give verbal hints with statements such as: “I won’t be a problem for you much longer,” “Nothing matters,” “It’s no use,” and “I won’t see you again”; say things like: “I’m going to kill myself,” “I wish I were dead,” or “I shouldn’t have been born.; put his or her affairs in order, for example, give away favorite possessions, clean his or her room “for the last time,” throw away important belongings, etc.; make arrangements or setting one’s affairs in order; become suddenly cheerful, happier, calmer after a period of depression; show signs of psychosis (hallucinations or bizarre thoughts); talk, read, or write about suicide or death; have a preoccupation with death; visit or call people to say good-bye; give things away; return borrowed items; or engage in self-destructive behavior like self-cutting (31,51-54).

It should be the responsibility of the school to disseminate information about risk factors, protective factors, and warning signs to staff, faculty, students, and parents. Such information may increase the potential that an adolescent in need of help receives the care and support needed to cope with experiencing suicidal ideations and feelings.
Prevention Strategies

Given the potential impact that suicidal behaviors can have on the students, staff, and various members of the community, preventing a suicide from ever occurring should be the ideal goal. Research has suggested the following nine prevention strategies that schools may choose to use in order to effectively prevent adolescent suicide. It should be noted that by using just one of these strategies in isolation a school cannot combat adolescent suicide; more than one strategy is necessary.

1. Established Policies and Procedures focused on such issues as how to respond effectively to a student who may be expressing suicidal behaviors or threats, how to respond to the aftermath of a suicidal attempt or a death by suicide, and the various roles school personnel may play in preventing, intervening, and responding to a student who may be suicidal (15,20,26,27,31,35,55-60).

2. Staff and faculty training, sometimes referred to as gatekeeper training, has been found to be an essential component for any suicide prevention program and is universally advocated as a necessary element of a school-based prevention program (9,12,14,15,17,18,20,21,24-26,31,35,57,58,60-62). Gatekeeper training usually consists of training any adult that interacts or observes students to be able to identify any students who be at-risk for suicide, determine the level of risk, know where to refer a potentially at-risk student, how to contact these referral sources, and what school policies are in place that relates to suicidal crisis situations (9,15,17,63).

3. Training parents and community members about suicide prevention. Although it may be beyond the scope of responsibility for schools to actually train community members in the same way school staff members are trained (12), schools should make sure that there are established agreements between the school and crisis service providers such as the police, clergy, mental health agencies, and ambulatory agencies (12,26,31,35,63). Training parents about warning signs, risk factors, protective factors, community resources, what to do following a suicidal crisis, and the need to restrict access to potentially lethal means can be an effective method for reducing the likelihood that an adolescent will engage in suicidal behaviors (9,12-14,25,31,55).

4. Student Curriculum Addressing Suicide. Student curriculum as a prevention strategy has received a lot of attention. Research in the past has suggested that curriculum may cause harm to a select group of students (attempters and/or black males) (64-66), however subsequent studies have found that when curriculum addresses suicide in a manner consistent with empirical evidence and is taught in a sensitive and educational manner, students showed improvements in attitudes concerning suicide (67,64,68-71), showed increased knowledge about suicide (warning signs and risk factors), particularly about where and how to get help for themselves or a peer (67,68,66,69,70,72-74). These results have important implications when one considers that adolescents who are considering suicide and other violent actions first confide in peers (61,62,68,76,77). Research suggests that curriculum should avoid one-shot approaches (12,25,78) and should use a mental health model instead of a stress model when discussing suicide (14,25,62,69,79).

5. Peer Support Groups. Research suggests that students who are potentially at risk for suicidal behaviors are more likely to confide in and feel comfortable with peers rather than adults (61,62,68,76,77). For this reason some research suggests that schools should provide an opportunity for vulnerable students to meet with other students in a comfortable group climate (43,58,63,80). The rationale behind these support groups is that they help youths at risk develop peer relationships and more appropriate coping skills, thereby reducing feeling of isolation, antisocial behavior, substance abuse, and other early risk factors while enhancing important protective factors (43,81). Although research suggests that these programs can be effective at preventing suicide, schools may wish to use these programs in conjunction with screening programs in order to identify students at risk and they should not be used as a substitute for professional counseling or therapy (58,63,81).
6. Teaching Adaptive Skills to Students. Teaching students proper social skills, problem-solving strategies, and coping skills, and help-seeking skills may provide a sort of protective factor against suicidal behavior (9). Evaluation studies that have examined the effectiveness of skills training programs have found reductions in completed and attempted suicides (20) and improvements in attitudes and emotions (72,82). Empirical evaluations of programs that have focused on skills training strategies have also found an increase or enhancement of factors that protect adolescents from suicide while reducing the risk factors for suicide in these adolescents (33,74,83,84). These strategies have also been suggested as ways to reduce depression, hopelessness, and drug abuse in adolescents, all risk factors for suicidal behaviors and/or thoughts (9). Suicide prevention programs that attempt to teach problem solving skills, coping skills, social skills, and help-seeking skills may not only potentially prevent suicidal behaviors from occurring but may also help prevent unintentional injuries and violence in schools (85-90). Research seems to suggest that adaptive skills training should be taught in schools not simply to prevent adolescent suicide but to ensure that students are taught the necessary skills to become a productive adult.

7. Screening. Screening is a prevention strategy that is intended to identify students who are potentially at risk for suicide through interviews and self-reports on questionnaires (91-94). The rationale behind screening is that since suicide is a low incidence event, prevention may be more effective and efficient if only those students that are potentially at risk for suicide are identified and referred (63). Research also suggests that adolescents will honestly state if they are suicidal when directly asked (14), which means that screening has the potential to recognize students that one researcher calls “quietly disturbed”(60). The relatively scant amount of research evaluating screening studies, which have shown effective results through screening (91,92), have utilized mass screening as a first step in identifying students. After a student has been screened, if he or she screens positive for suicidal potentiality, then direct assessment by trained clinicians should be done within seven days (93). The benefit of mass screening is that a school should identify most and ideally all students, who participate in the screening, who may be potentially at risk for suicide. However, mass screening can be rather expensive. A less expensive screening procedure is focused screening, which uses gatekeepers and peers to identify and refer students potentially at risk who would subsequently be screened and evaluated by a mental health professional. This method is less costly however may not capture some student that go unnoticed by gatekeepers and peers. Despite schools’ lack of use of screening methods (15,61), many researchers contend that screening is an essential and critical component of any effective suicide prevention program (14,17,43,79,95). Screening has also been found to have moderate support from teachers and administrators (96). Some limitations of screening include: screening may identify as much as 10% of the adolescent at school as being at-risk, creating a costly need to follow-up those identified as at-risk for suicide (15); schools need parental consent to screen, which usually runs about 50% (18), and since suicidality fluctuates in adolescents (18), schools will have to conduct repeated screenings in order to avoid missing a student potentially at risk for suicide (17,18,21).

8. Postvention. Postvention guidelines are intended to provide a timely and proper response to a suicidal crisis (suicidal threat, attempt, or completion). Appropriate postvention programs can be viewed as a form of prevention since, if carried out correctly and successfully, can reduce potential cluster (copycat) suicides (97). It is not enough for a suicide prevention program to implement and maintain “before the fact” prevention elements, designed at preventing a suicidal event from occurring, but a program must have an established method of responding to a suicidal crisis. One such method, necessary for any adequate response is utilizing an established response team, made up of school staff members and various members of the community (26,31,43,57). This crisis team should meet regularly and each member of the team should know his/her role if
a death by suicide occurs. Establishing guidelines for responding to a death by suicide is generally considered an essential and critical element to any comprehensive and effective suicide prevention program (9, 17, 20, 43, 57, 62, 63, 98).

9. Crisis centers and hotlines. Although research has suggested that hotlines are only minimally effective (95) at preventing suicide, research also suggests that crisis hotlines reach an important and usually underserved population (63); help those students that use them (99); have been associated with decreases in suicide rates among white females under 25, the most frequent users of hotlines (43); are endorsed by youth as a more acceptable resource than mental health centers (68); and can serve as “drop in” centers, providing immediate intervention as well as acting as referral agents to mental health services in the community (17). Although research on crisis center can be inconsistent (100), schools should provide students with the phone number of area crisis centers. Research has not found any potentially harmful results from students utilizing crisis centers and/or crisis hotlines.

**Intervention Strategies**

Although the most ideal intervention strategy for suicidal behavior is prevention, sometimes prevention efforts fail to identify or detract a student from voicing suicidal thoughts or expressing suicidal behaviors (101). If such prevention efforts fail, skills and procedures for intervening with a student potentially at risk for suicide are essential for administrators, faculty, and staff. School-based suicide intervention strategies consist of those school-related activities that are designed to appropriately and effectively handle a student presently making a suicidal threat and/or attempt (57). In order for a school to ensure that effective intervention will occur if a student does experience a suicidal crisis the school should: have established relations and links to agencies within the community such as mental health agencies, crisis centers, law enforcement agencies, youth health service agencies, psychiatric facilities, the clergy, or the community health department (26, 31, 43, 51, 57, 102-106); have a response plan developed in advance of a suicidal crisis, which identifies step-by-step what to do should a student threaten or attempt suicide (26, 63, 103, 107); establish and detail the roles of a crisis intervention team (26, 31, 43, 51, 57, 63, 103, 104, 108); and should train faculty, staff, and administrators to be able to identify students who be at-risk for suicide, determine the level of risk, know where to refer a potentially at-risk student, how to contact these referral sources, and what school policies are in place that relates to suicidal crisis situations (9, 12, 16-18, 20, 21, 24-26, 31, 43, 57).

Although this may sound overwhelming for a school to address these components, without these components schools may feel even more overwhelmed if they are unprepared to respond to a student experiencing a suicidal crisis.
An effective suicide prevention program should be comprehensive; it should not limit its scope to include only preventative and intervention measures but should also address postvention measures, or measures that are taken after a suicide crisis (20,25,78,109). What is done after a suicide crisis (threats, attempts, or deaths by suicide) is just as important as what is done before one. The best way to address the needs of the school is to be prepared with a comprehensive and recognized plan of action, which should be developed before a students death and should detail a step-by-step process a school should follow (103,107).

Unfortunately, however, many schools lack a preplanned postvention program and tend to respond to a suicidal crisis in an unorganized fashion (57). Appropriate postvention programs can be viewed as a form of prevention since, if carried out correctly and successfully, can reduce potential cluster (copycat) suicides (97). By not having an adequate postvention program in place, schools may unknowingly contribute to further suicidal behaviors or copycat suicides. The rationale behind postvention programs in schools is not only to reduce subsequent morbidity and mortality of suicide in fellow students but also to reduce the onset and degree of debilitation by psychiatric disorders such as posttraumatic stress disorder (9). After a suicidal crisis, friends and family are at an increased risk of developing posttraumatic stress disorder as well as relying more heavily on alcohol and drug use to numb the pain (100). A comprehensive postvention plan increases the likelihood that a school can decrease the risk of copycat suicides and provide a much-needed service to those left behind following a suicide.

It is not enough for a suicide prevention program to implement and maintain “before the fact” prevention elements, designed at preventing a suicidal event from occurring, but a program must have an established method of responding to a suicidal crisis. An effective postvention plan may also decrease the chance that an acute stress reaction caused by the suicide will lead to a more chronic and debilitating reaction for those left traumatized and grieving.

An effective postvention plan should also have a working relationship with the media and have established guidelines for responding to media requests, which are almost sure to follow a death by suicide or even an attempt. Research has shown that media coverage has an influence on whether, following a suicide, copycat or imitations suicides will occur (31,110,111). Evidence suggests that exposure to suicide through the media can lead others to commit or attempt suicide (117), an effect sometimes referred to as suicide contagion or suicide imitation/modeling (105). Given the fact that this imitation effect is most prominent among adolescents (31,112,114) and that the school is the first place that the media will go for information following a suicide, it seems only prudent that school be prepared and willing to assist reporters in reporting the appropriate information in order to avoid potentially harming other students. Preliminary research has shown that following the implementation of media guidelines in Austria, suicide rates declined by 7% in the first year, nearly 20% in the 4-year follow-up. These studies also found that subway suicides (a focus of the media campaign) decreased by approximately 75% (113,115,116).

By using the media as an alliance against further suicidal behavior instead of as an enemy out to damage the reputation of the school, schools have the potential to have a positive impact on suicidal behavior in adolescents. Schools have the opportunity to prevent suicidal behavior from occurring, intervene and help a student not choose suicide, and help friends and family members of a student that has died by suicide.

It is essential that schools are prepared and willing to address the serious and tragic issue of adolescent suicide.
References continued

Literature Review


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