

Letter Child Study Center



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Editors' Comment

Suicide is a serious public health problem in the U. S. At the present time more teenagers and young adults die from suicide than from cancer, heart disease, AIDS, birth defects, stroke, pneumonia, influenza and chronic lung disease combined. The toll of grief and suffering that suicide exacts on adolescents and young people and their families is incalculable. In this issue of the *NYU Child Study Center Letter* the authors discuss recent research regarding the identification of risk and protective factors, the importance of mental disorders in the understanding of suicidal behavior, and implications for early detection and prevention strategies.

HSK/AG

Case Example

"I am worthless. I am of no use to anyone and no one is of any use to me. What if I kill myself? How can you kill nothing? A person who commits suicide at least has a life. She must know joy to know misery. I have known nothing. Love didn't change anything. The future looks worse; If I wake up tomorrow it won't be any different. There'll still be more of the same. I need people and there aren't any who care. If I disappeared no one would know."

A journal entry of a fifteen-year-old girl with a history of depression who attempted suicide by slashing her wrists after her boyfriend dated another girl.

YOUTH SUICIDE

Introduction

People have taken their own lives in countries around the world for many centuries. Notions of what suicide means and what to do about it have varied, but at the present time the rates of suicide and suicide attempts in adolescents and young people, are of concern. Recently, however, knowledge and strategies have become available to approach suicide as a preventable public health problem with opportunities to save many lives.

Prevalence

At the present time suicide is the third leading cause of death for persons 15 through 24 years of age, after motor vehicle accidents and homicide. Before the mid-1970s adolescent suicide was a rare event; now nearly a half million teens make a suicide attempt each year. From the 1950s through the 1980s the incidence of suicide among adolescents and young adults nearly tripled. Although the rate in males has decreased over the past decade, the lower suicide rate in female teens has not changed. The actual statistics may be higher because some of these deaths are labeled accidents.

For every completed suicide, an estimated 8 to 25 suicide attempts occur. The results of the 1995 National Youth Risk Behavior Survey of students in grades 7 through 12 indicated that nearly one-fourth of students had seriously considered attempting suicide during the 23 months preceding the survey, nearly 18 percent had made a specific plan and nearly 9 percent had made an attempt.

Methods of suicide

The most commonly used methods for suicide are firearms, hanging, poisoning, (overdoses), and jumping. Males tend to use more violent and irreversible methods;

females more often will overdose on drugs or slit their wrists. In the latter two methods, there is a greater chance of someone taking corrective action, which may account for the fact that more males than females complete suicide attempts.

Risk factors

What does research show about young people and suicide?

Developmental stage

The suicide rate among children under the age of 10 is very low, but rises in adolescence. Several studies have shown that elementary school children do indeed have suicidal thoughts and feelings, but several factors protect them from acting on these feelings. Young children 1) usually have close relationships with their parents and teachers and receive emotional support, 2) have an immature cognitive understanding of the concept of death, 3) are limited in their ability to plan the suicidal act and to make decisions regarding the method to be used, and 4) have low rates of depression.

Adolescence for many is a stressful time, and ages 13 and 14 are peak periods for suicide attempts. Among older adolescents, between 8 and 10 percent have attempted suicide, with 5 percent sustaining an injury and 2 to 3 percent seeking medical attention. Teenagers tend to communicate less with their parents and have less opportunity to develop supportive relationships with particular teachers. For most teenagers, adolescence is a period marked by role experimentation that will hopefully lead to the development of a sense of personal identity. Adolescence, however, can lead to confusion, isolation, and alienation and can result in drug and alcohol abuse, sexual promiscuity, and a sense of hopelessness and helplessness for some teenagers.



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Gender

In the U. S., at age 10-to-14-years boys commit suicide almost three times more often than girls; at age 15-to-19 five times more often, and at 20-to-24 almost ten times more often. This means that one female commits suicide for every four males. These gender differences may be due to the fact that suicide is often associated with aggressive behavior, which is more common in males. The strong social connectedness of girls is an additional protective factor.

Ethnicity

Suicide rates among whites are higher than among blacks at all ages, including the teen years. Although the risk is greatest among young white males, from 1980 through 1995, suicide rates increased most rapidly among young black males. Native-American males had the highest suicide rate; African American females, the lowest. Ethnic differences may be due to selective under-reporting among minorities. Certain cultural traditions also play a part; for example, some cultures reduce taboos against suicide (e.g., Japanese or Apache Indians). Those cultures that regard suicide in a negative light might inhibit individuals from committing suicide. Religious adherence might decrease suicidal behavior by increasing avenues of social support or through its teachings of personal responsibility.

Sexual orientation

Homosexual and bisexual youth have a high rate of attempted suicide. A statewide survey of students in grades 7 through 12 indicated that 28.1 percent of bisexual and homosexual males and 20.5 percent of bisexual and homosexual females had reported attempting suicide. Although gay, lesbian and bisexual youth have higher rates of suicidal ideation and suicide attempts, their risk for completed suicide has not yet been determined.

Family functioning

Research indicates that suicide victims communicate less often and less fully with their parents than other teens, and they are somewhat more likely to come from a broken home than other youngsters of the same ethnic group, although the overall impact of separation/divorce is small. Marital or parent/child friction, in and of themselves, do not appear to affect suicide risk.

A high proportion of teens who commit or attempt suicide have had a close family member (parent, sibling, aunt, uncle or grandparent) or friend who attempted or committed suicide. The relative contributions of identification with the deceased (modeling suicidal behavior as an acceptable response to solving problems) versus heredity have yet to be clarified.

Psychiatric diagnosis

Psychiatric diagnoses are almost always part of the suicide victim's profile; psychological autopsy studies show 90% of these teenagers had a psychiatric disorder. The most common diagnoses are:

Mood disorder	60%
Antisocial disorder	50%
Substance abuse	35%
Anxiety disorder	27%

Only a small number of suicides occur in teenagers with schizophrenia or manic-depression.

Depression alone or in combination with aggressive behavior and/or substance abuse or anxiety has been found in over half of all suicide victims.

Alcohol and drug abuse have been present in approximately two-thirds of 18- to 19-year-old males, but are not common in younger males or female suicide victims.

Previous suicide attempts were made by approximately one-third of teenage suicide victims.

Cognitive style

Thoughts of hopelessness, often characteristic of depression, are common in adolescents contemplating suicide. These adolescents believe that things will never get better; they find it difficult to understand that depressed feelings are temporary and will abate. They perceive themselves to be the cause of negative events, believe they have no control over what happens to them, and that nothing they do will change things. This bleak view of the future, combined with an impulsive style, may influence suicidal behavior.

Neurobiology

Suicidal behavior is known to run in families and can exist whether or not other inherited conditions such as depression and schizophrenia are diagnosed in a family member. Genes could be responsible for neurobiological differences that appear to influence the expression of behavior. In particular, low serotonin, a neurotransmitter, has been shown to play a role in those who are suicidal. Cerebrospinal fluid, postmortem brain autopsies, and neuroimaging studies, have shown that low serotonin is associated with a lower threshold to acting on both suicidal and aggressive impulses. Females, who generally have higher levels of serotonin metabolites, have lower rates of both aggressive behavior and high lethality suicide attempts. Low cholesterol diets result in lower serotonergic activity and increased aggression in nonhuman primates. Although there appears to be an increase in suicide risk with low serum cholesterol in humans, a direct effect of cholesterol on serotonergic activity has yet to be demonstrated.

Change in the response of stress related hormones (cortisol) to testing via the Dexamethasone Suppression Test has been implicated as a marker for subtypes of depression and possibly likelihood of suicide in adults. A goal of future neurobiological research is to develop biologic screening tests for adults and children with predictive value that will allow for the design and implementation of specific prevention efforts.

Stress-vulnerability model

Suicide is the result of the interaction among seemingly disparate factors. It often occurs when an individual with a long-term predisposition experiences a stressful event. The act of suicide requires both a stressor (precipitant or trigger) as well as an underlying vulnerability (diathesis) towards acting on suicidal thoughts. A recent distressing event may set off a long-standing vulnerability. The interaction of a psychiatric disorder, substance abuse, a recent stress, inadequate support, and feelings of hopelessness may lead to suicide for some teenagers. Studies show that the following stresses occurred in the lives of teenagers who committed suicide:

- Disciplinary crisis - suspension from school, appearance in juvenile court
- Relationship problem - breakup with girl or boyfriend; rejection by a friend
- School failure
- Humiliation
- Pregnancy

Clearly, not all teenagers who endure such experiences resort to suicide. Only a few of all youngsters who have a psychiatric disorder, a stressful event, inadequate support and a hopeless view of life actually commit suicide.

What makes the difference? What factors might facilitate the likelihood of suicide?

- Personality traits such as impulsivity
- Biological traits such as neurochemical imbalances
- Lack of strong family ties
- Social factors such as absence of strong taboos, social isolation and recent occurrence of suicide
- Method availability (easy access to firearms) and familiarity
- Agitated mental state

What factors might inhibit or protect a person from committing suicide?

- Strong family and social support
- Religious taboos
- Good grades
- Presence of others
- Difficulty of access to method
- Slowed down, rather than agitated, mental state

Intervention and treatment

The adolescent who has made a suicide attempt or is showing the warning signs leading to suicidal behavior needs to have his or her illness recognized and diagnosed and appropriate treatment plans formulated. A treatment plan should be based on an evaluation that includes assessment of the adolescent's mental state and the nature of family interactions. When a teenager who has made a suicide attempt is brought to a hospital emergency room hospital admission may be warranted to insure safety.

Psychopharmacologic treatment

Psychopharmacologic treatment of suicidal behavior involves treatment of associated psychiatric disorders. Antidepressants (tricyclic TCAs); monoamine oxidase inhibitors (MAOIs); and selective serotonin reuptake inhibitors (SSRIs) are useful in the treatment of depression in adults. One cannot directly extrapolate from adult data since depressed adolescents have not derived the same benefits from TCAs. There is supportive

evidence for the benefits of SSRIs in adolescent depression. Given their efficacy, lack of lethality during intentional overdose, ease of use (no need for therapeutic blood level monitoring and electrocardiograms) and relative lack of side effects compared to TCAs, SSRIs are first line agents in the treatment of adolescent depression. Mood stabilizers (lithium, valproate) are used with patients with bipolar disorders but have also not been assessed in randomized controlled trials with adolescents. Fluvoxamine, an SSRI, has been shown to be effective in the treatment of children and adolescents with social phobia, separation anxiety disorder and generalized anxiety disorder.

There are no current medication strategies that directly treat suicidal behavior, although there is suggestive evidence with adults that medicines which increase serotonin (SSRIs, atypical antipsychotics compared to older agents) may be protective against suicide attempts. There is intriguing epidemiologic evidence of decreasing suicide rates in Sweden and in white adolescent males in the U.S. over the past decade paralleling the exponential increase in prescriptions for antidepressants, particularly SSRIs, over the same time frame. Although SSRIs have been shown to decrease suicidal ideation in both depressed and nondepressed adults with borderline personality disorder, their impact on reducing future suicide attempts is less robust.

Psychological treatment

There are few controlled studies of adolescents who attempt suicide which would lead to the design of optimal treatment approaches. It is customary to use a problem-oriented approach that addresses the diagnosis, the circumstances that led to the attempt and the family situation.

Cognitive-behavior therapy (CBT) aims to help the teen identify negative feeling states, correct irrational ideas and become aware of the available options. For example, if suicide is seen as the "only solution" to a "hopeless" problem, the therapist will help the teen balance reasons for living and dying, teach alternative problem-solving solutions, and through the use of role-playing, rehearse strategies that can be used in a crisis situation.

Dialectical behavior therapy (DBT), currently used with at-risk adults with borderline personality disorder, is being modified for use with adolescents. This approach, based on a combined motivational and skill deficit model, has been found useful with individuals who are vulnerable to intense reactions but have deficits in regulation of emotions.

Interpersonal therapy (IPT) is based on the premise that the symptoms of depression occur in an interpersonal context. Treatment focuses on training the teen to learn strategies to develop, assess and respond to relationships in context.

Family counseling is recommended to reduce parent-child conflict and to improve family communication and conflict-resolution skills. Improved family relations often reduce the teen's feelings of hopelessness and anger.

Group therapy may be used when there is a need to reduce a sense of isolation or to provide peer support and opportunities to share problems. However, given the evidence that suicide may sometimes be a modeled behavior, groups with attempters should be organized and run with caution by skilled and experienced professionals.

Prevention

The National Strategy for Suicide Prevention, a public-private undertaking launched on May 2, 2001 by the U. S. Surgeon General David Satcher, lays the foundation of a national strategy to confront this serious public health problem. The goals are to:

- promote awareness that suicide is a public health problem that is preventable
- develop and implement strategies to reduce the stigma associated with being a consumer of mental health, substance abuse and suicide prevention services
- develop and implement community-based suicide prevention programs that build life skills and connections to family and community support
- promote efforts to reduce access to lethal means and methods of self-harm
- implement training for recognition of at-risk behavior and delivery of

effective treatment. Medical and other professionals should be trained in screening adolescents at-risk

- identify and refer at-risk teenagers. A screening program to identify those who have made previous attempts or who are currently suicidal should be implemented
- develop and promote effective clinical and professional practices by establishing a uniform system for hospitals, policy-makers and professionals to identify and report suicides
- increase access to and community linkages with mental health and substance abuse services. The number of states that require health insurance plans to cover mental health issues on the same level as physical illness should be increased
- improve media reporting and portrayals of suicidal behavior, mental illness and substance abuse. For example, broadcasters should run public service ads such as those on children's car seats, smoking or drinking while pregnant. It is important that the media not minimize the role of mental illness, romanticize or glamorize the suicides of celebrities or describe methods in precise detail. These techniques are likely to lessen contagion effects
- promote and support research on suicide and suicide prevention

What parents can do

A teen's statement of a wish to kill him/herself must be taken seriously. Before actually committing or attempting suicide, teens often make direct statements about their intention to end their lives, or less direct statements about how they might as well be dead or that their friends and families would be better off without them.

Don't worry that discussing the problem will encourage the teenager to go through with the plan. On the contrary, it will help him or her to know that someone is willing to be a friend. It may save a life.

Watch for symptoms of depression, which may include:

- a change in eating and sleeping habits
- a marked personality change, exhibiting angry actions or rebellious behavior or withdrawal from friends and regular activities
- involvement in drugs or alcohol or other risky behaviors such as reckless driving
- an over-reaction to a recent humiliating experience
- difficulty in concentration and a decline in the quality of school work
- persistent boredom and/or lethargy
- unusual neglect of appearance
- complaints about physical symptoms such as headaches, stomachaches and fatigue
- a pattern of giving away or throwing away possessions
- intolerance of praise or rewards
- preoccupation with death in writing songs or poems
- an increase in comments such as "I can't take it anymore" or "Nobody cares; I wish I was dead."

Depression and suicidal feelings are treatable mental disorders. As we come to understand the interactive processes among pre-existing psychopathology, environmental risk factors, and interpersonal problems we are building the knowledge to develop treatment and prevention strategies. With support from family and community resources and professional treatment, teenagers and young adults who show suicidal behavior can be helped, tragic actions prevented, and healthier behaviors established.

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<http://www.aboutourkids.org/articles/guidetopsychmeds.html>

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Resources

National Suicide Prevention Strategy www.sg.gov/library/calltoaction/strategymain.htm

Suicide Prevention Advocacy Network (SPAN)
www.spanusa.org/home.htm

American Association of Suicidology
<http://www.suicidology.org/>

National Institute of Mental Health (NIMH)
<http://www.nimh.nih.gov/>

Substance Abuse and Mental Health Administration (samhsa)
<http://www.samhsa.gov/>

American Foundation for Suicide Prevention
<http://www.afsp.org/>



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