

**SOUTHERN CALIFORNIA CENTER OF EXCELLENCE ON YOUTH VIOLENCE
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**Fact Sheet
YOUTH SUICIDE**

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Introduction

Youth suicide is a major public health problem in the United States today. Youth between the ages of 15 to 24 are more likely to die from committing suicide than from all natural causes combined (National Center for Health Statistics [NCHS], 2000). As such, the reduction of adolescent suicide is one of the major objectives of the Healthy People 2010 Initiative (Department of Health and Human Services [DHHS], 2000).

Scope of the Problem

Age and gender differences

Suicide is not a common phenomenon during childhood and early teens (Gould & Kramer, 2001). For 2001, the rate was 1.5 suicides per 100,000 children aged 10-14. Suicide mortality increases considerably in the late teens, and the increase continues into the early twenties regardless of gender. Youth suicide is marked by a distinct gender difference; although females are more likely than males to attempt suicide, males are roughly five times as likely to commit suicide.

Differences by ethnicity

Generally, European-American youth have a higher prevalence of suicide than African-American, Latino, and Asian-American/Pacific Islander youth, except for American Indian/Alaska Native youth who have the highest prevalence of suicide across all age groups. In particular, American Indian/Alaska Native males have the highest youth suicide rate in the United States, with substantial variation by factors such as tribal affiliation and geographical area (Wallace, Calhoun, Powell, O'Neill, & James, 1996). Whereas research suggests that Latino youth are not overrepresented among *completed* suicides (e.g., Demetriades et al., 1998), they are overrepresented among *attempted* suicides (Center for Disease Control [CDC], 1998).

Methods of youth suicide

Firearm death remains the most prevalent method of suicide, regardless of age, gender, and ethnicity. In fact, in 2001 firearm-related suicide accounted for almost 54% of all

youth suicides. The second and third most prevalent methods of youth suicide are hanging and poisoning, respectively. The gender difference in the rates of completed suicide is most likely accounted for by the differences in suicide methods. A greater proportion of female suicides is accounted for by poisoning than male suicides among youth, whereas firearms, which have higher lethality, account for a greater proportion of male suicides compared to females.

Nonlethal suicide behaviors

The significance of youth suicide as a major public health problem is even more evident when we take into consideration the high rates of nonlethal suicidal behaviors such as attempted suicides and suicidal ideation. For example, it is estimated that for every completed suicide, there is an estimated 100 to 200 attempts that are made. Attempted suicides are important to recognize since they become a risk factor for an eventual completion.

Risk Factors

Suicidal behaviors are complex. Past research has identified multiple risk factors associated with these behaviors.

Psychopathology

The majority of youth who have completed suicide had significant psychiatric problems, including depressive disorders and substance abuse disorders. Major depression has been the most prevalent condition (Shaffer et al., 1996). Female youth suicides have a higher prevalence of an affective disorder than male suicides. Substance abuse is also a significant risk factor, especially for older adolescent male victims (Shaffer et al., 1996). Substance abuse has consistently been a significant psychiatric risk factor when it is co-occurring with an affective disorder (Gould & Kramer, 2001).

Previous suicide attempts

One quarter to one-third of youth suicide victims had made suicide attempts prior to the completed suicide. Moreover, the risk of completed suicide following suicide attempts is also higher. For male adolescents the risk is thirty times higher, whereas for female adolescents the risk is three times higher (Shaffer et al., 1996).

Access to lethal methods

Firearms are the most common method of suicide among youth. The youth's own home is the single most common location for firearm suicides to take place (Brent et al., 1993). Associations have been found between the accessibility and availability of firearms in the home and the risk for youth suicide (Brent et al., 1993; Kellerman et al., 1992). Moreover, the availability of loaded guns has been associated with an elevated

risk of youth suicide, regardless of presence of diagnosable psychiatric disorder(s) (Brent et al., 1993).

Maladaptive coping skills

Maladaptive coping skills and poor interpersonal problem-solving ability may limit the adolescents' ability to generate solutions to a problem, resulting in considering suicide as the only solution (McBride & Siegel, 1997). Suicidal youth experience a greater number of stressful life events compared with their nonsuicidal peers. Consequently, when negative stressors are compounded by other multiple negative events, problem-solving difficulties may become paramount.

Stressful life events

Multiple negative life events are typically experienced by adolescents who attempt and/or complete suicide (Reinhertz et al., 1995). These stressors are likely to overtax the adolescents' coping skills because of inexperience with such life situations (Wagner, Cole, & Schwarzman, 1995). Completed suicide among youth is associated with experiencing life stressors such as interpersonal losses (e.g., breaking up with a boyfriend/girlfriend) and legal or disciplinary problems (e.g., getting into trouble at schools or with a law enforcement agency).

Suicide contagion

A significant increase in the number of suicides occur following the appearance of suicide stories in the mass media, including newspaper articles, television news reports, and fictional and non-fictional dramatization (Gould, 2001). Particularly, the influence of suicide stories on subsequent completed suicides has been the greatest for adolescents (Phillips & Carstensen, 1986). However, the linking of the media's report of suicide and prospective suicide rates dissipates for those beyond the age of 24 (Gould, Wallenstein, & Kleinman, 1990).

Family history

Although how familial psychopathology increases the suicide risk among youth is unknown, a family history of suicidal behaviors is known to elevate the risk of completed suicide in youth (Gould et al., 1996). Additionally, parental psychopathology (depression and substance abuse) is associated with suicidal behaviors (e.g., Fergusson & Lynskey, 1995), and completed suicide among youth (Gould et al., 1996). Some suggest that the association between parental and youth suicide may reflect a genetic factor rather than family dysfunction per se (e.g., Schulsinger, 1980).

Socioeconomic status

Little is known about the association between socioeconomic status (SES) and youth suicide. Gould and colleagues (1996) found a differential effect of ethnicity in comparing adolescent suicide victims with community controls. These researchers found that only African American suicide victims had a higher SES status than their general population controls. Psychopathology such as untreated depression and substance abuse disorders is one of the major causes of adolescent suicide. However, a variety of barriers to seek treatment exist especially among those with the low SES, thus, elevating the risk for suicidal behaviors among youth. Some of these health disparities are accounted for by differences of gender, ethnicity, education level, income, disability, geographic location, or sexual orientation.

Acculturative stress

One feasible explanation for the higher risk of non-lethal suicidal attempts among Latino youth is that the risk is associated with the unique life experience of immigration. The association between psychopathology and suicidal behavior depends on the degree of acculturative stress. A higher level of suicide attempts has been associated with drug use among Latino youth who were experiencing greater acculturative stress, perceived discrimination, poor opportunities, and language difficulties (Vega, et al., 1993).

Sexual orientation

Research suggests that Gay, Lesbian, and Bisexual (GLB) youth are at an elevated risk for attempting suicide (McDaniel, Purcell, & D'Augelli, 2001). More GLB students report suicide attempts compared with their heterosexual counterparts. Research also suggests that GLB youth are at high risk for associated maladaptive risk behaviors, including fighting, victimization, and frequent use of alcohol and drugs (Garofalo, Wolf, Wissow, Woods, & Goodman, 1999). These mental health problems and substance abuse disorders are crucial predisposing factors for suicide in GLB youth.

Biological risk factors

Research suggests that abnormalities in the serotonergic system are associated with suicidal behaviors, as well as impulsivity and aggression. For example, it has been

found that low levels of serotonin among suicide attempters were predictive of future completion of suicide (Pfeffer, McBride, Anderson, Kakuma, Fensterheim, & Khait, 1998).

Promising Prevention Strategies

Whereas advances in knowledge have led to increased understanding of the risk factors for child and adolescent suicide, the application of this knowledge to the design of prevention strategies and program evaluation to examine effectiveness of suicide prevention programs has just begun. According to CDC (1992; 1994), the main goal of youth suicide prevention strategies is twofold: risk factor reduction strategies and case finding strategies.

Risk reduction strategies are primarily targeted at suicide prevention for youth and the community. They include (a) promoting overall mental health among school-aged youth by reducing early risk factors for depression, substance abuse, and aggression, and building resiliency (e.g., self-esteem and stress management); (b) providing crisis counseling; and (c) restricting access to lethal means, especially, handguns.

Promotion of mental health among school-aged youth is typically achieved by general suicide education and peer support programs. General suicide education is designed to develop healthy peer relationship and social skills among high-risk adolescents (CDC, 1994). It provides youth with information about suicide, including its warning signs, and how to seek professional help for themselves or others. Crisis counseling through crisis centers and hotlines involves trained volunteers and paid staff providing counseling via phone or drop-by services for suicidal youth. Postventions are interventions after an incidence of both successful and unsuccessful suicide attempts. These programs aim at preventing suicide contagion and helping youth and family cope effectively with an interpersonal loss following a suicide. Restrictions of access to lethal means are interventions designed to reduce a person's access to lethal means of completing suicide. Disposals of medications and removing and/or locking up firearms from the home of a suicidal adolescent are types of means restrictions (CDC, 1994).

Case finding strategies aim at detecting suicidal youth by referral to mental health care (CDC, 1994). There are two general types of prevention strategies, active and passive. An example of an active type strategy is the administering of screening programs (general screening or a targeted screening after a suicide). Alternatively, an example of a passive type strategy is providing gatekeeper training for schoolteachers and community adults, providing general suicide education in schools, and offering crisis counseling. The goals of general education often aim at reducing the stigma associated with accessing mental health care to increase self-referral and/or referrals by persons who recognize suicidality in someone they know (CDC, 1994).

In screening programs, self-reports and individual interviews are administered to identify depression, alcohol or substance abuse problems, recent suicidal ideation, and past

suicide attempts. Further detailed assessment and treatment are provided where necessary. Gatekeeper training involves educating and training adults in contact with suicidal youth such as school staff (e.g., teachers, counselors, and coaches) and community members (e.g., physicians, clergy, and police) to identify and refer children and adolescents at risk for suicide (Gould and Kramer, 2001). General suicide education is also categorized as case finding strategies because of its emphasis on gaining knowledge about suicide and its warning signs, including information about how and where to get professional help.

Overall, there is a shortage of evaluation studies on many ongoing prevention strategies. Restrictions of access to lethal means are considered to be the most promising. The findings for general suicide education curriculum in schools are equivocal. One ethical concern of general suicide education is that while some programs reported shifts in desirable attitudes, other programs may even increase maladaptive coping responses with a possibility of suicide contagion. Screening programs have been found to be effective in identifying high-risk students. There is a severe shortage of evaluation research for crisis centers and hotlines.

An evaluation of C-CARE and CAST

Suicide prevention programs often incorporate both case finding and risk factor reduction strategies. For instance, Thompson and colleagues (2001) evaluated the efficacy of two indicated suicide prevention programs targeted for potential high school dropouts. In this study, high school students who were identified as “at risk” for suicide participated in one of the three conditions randomly assigned to schools: (1) counselors CARE (C-CARE), a comprehensive assessment of risk and protective factors followed by a brief intervention to improve a youth’s personal resources and social network; (2) Coping and Support Training (CAST) a 12-session small-group skill-training (e.g., problem-solving coping, personal control) and social support interventions added to the C-CARE; and (3) regular care control.

Questionnaire instruments were administered before the intervention, following C-CARE (4 weeks), following CAST (10 weeks), and at a 9-month follow-up. A significant decline was found in attitudes toward suicide and suicidal ideation among students who received interventions. C-CARE and CAST were effective in reducing depression and hopelessness compared with regular care. Female students had a greater reduction in anxiety and anger in response to experimental programs than male students. CAST was most effective in enhancing and maintaining personal control and problem-solving coping strategy. Overall, the study demonstrated the feasibility and effectiveness of school-based prevention programs in reducing suicidal behaviors and associated distress and for enhancing resiliency among youth at risk for suicide.

Clearly, additional prevention efforts to reduce youth suicide need to be designed, implemented, and evaluated. Due to the enormous effort and financial cost involved in launching and maintaining programs, efficacy and safety of the programs should be guaranteed before they are promoted. CDC’s (1994) recommendations include ensuring

that prevention programs are matched with access to mental health resources in the community; incorporation of several prevention strategies in developing programs; and incorporating rigorous scientific evaluation of studies including planning, process, and outcome evaluations.

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Related Publications on Youth Suicide

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Internet Resources

American Association of Suicidology (ASA): www.suicidology.org/index.html

American Foundation for Suicide Prevention (AFSP): www.afsp.org

U.S. Department of Health and Human Services: www.dhhs.gov

The Surgeon General's Call to Action to Prevent Suicide (1999):
www.surgeongeneral.gov/library/calltoaction/default.htm

Center for Disease Control and Prevention (CDC) National Center for Injury Prevention and Control (NCIPC): www.cdc.gov/ncipc

CDC's SafeUSA Guide to Preventing Suicide: www.cdc.gov/safeusa/suicide.htm

Suicide statistics from CDC's National Center for Health Statistics:
www.cdc.gov/nchs/fastats/suicide.htm

National Institute of Mental Health (NIMH) Suicide Fact Sheet:
www.nimh.nih.gov/research/suifact.htm

NIMH Frequently Asked Questions About Suicide:
www.nimh.nih.gov/research/suicidefaq.cfm

Selected Bibliography on Suicide Research - 1999:
www.nimh.nih.gov/research/suibib99.cfm

Depression in Children and Adolescents: A Fact Sheet for Physicians
www.nimh.nih.gov/publicat/depchildresfact.cfm