SUICIDE RISKS IN ADOLESCENTS

BY

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Abstract

Chair: Dr. Mary Armstrong

In the United States approximately 30,000 people a year commit suicide. The prevalence of suicide attempts by young adults has tripled during the past 25 years, and suicide is the third leading cause of death for people 15 to 24 years of age. Suicide exacts a tremendous personal and financial loss for family members as well as for society. In addition to the loss of contributions of the victims, surviving relatives and friends often carry a lifelong burden of self-doubt, guilt, or feelings of responsibility.

The purpose of this paper is to review the literature on risks associated with an adolescent suicide. The paper explores the relation between substance use, lack of support, hopelessness, psychiatric illnesses, sexual orientation, physical and sexual abuse, family history of suicide, cultural and gender risk factors associated with suicidal behavior in youth, and determination of suicidal adolescents. Caregivers, therapists, and health providers need to have adequate knowledge to act in the prevention of the suicidal behavior. Consequently, the information provided by this paper may help health care professionals to achieve the highest standards of assessment in their practice and better serve and protect adolescents.
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SUICIDE RISKS IN ADOLESCENTS

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Introduction

Adolescence is a time when, under hormonal influences, complex biological processes of development and cognitive maturation occur. Growth hormone secreted by the pituitary gland acts to stimulate DNA synthesis and increases cell proliferation and growth. Thyroxin secreted by the thyroid gland in response to hypothalamus stimulation enhances skeletal growth and sexual maturation, and influences mental functions. Gonadotropin-releasing hormone, secreted by the hypothalamus, stimulates pituitary to secrete follicle-stimulating hormone (FSH) and luteinizing hormone (LH). FSH and LH act on gonads and stimulate synthesis of sex hormones that encourages muscular development and growth spurt.

Besides numerous physical changes that an adolescent experiences, major changes occur in his or her cognitive and moral development. Formation of intimate relations, decisions about future life investment, planning a career along with physiological hormonal shifts make an adolescent more vulnerable than an adult for emotional instability and, if coupled with hopelessness, substance use, physical and sexual abuse, low self-esteem, mental illness and decreased coping skills, harmful behavior and even suicide can occur. The purpose of this paper is to help the clinician to increase knowledge related to identification of adolescents' risk factors for suicide and intervene with timely help.

Conception of suicide

The word suicide is not a new word, and first appeared in English usage around 1651. Suicide (from Lat. sui, of oneself, and cidium, from caedere, to kill) defined by Encyclopedia Britannica (1996) as the act of intentionally destroying own life. Physical self-destruction can occur in many ways, some obvious, some disguised, but always causing, in one way or another, one's own death.

Attitudes toward suicide have always been rooted in culturally determined conceptions of death. In Ancient Egypt death was defined as a passage from one form of existence to another and the dead were coequally perceived as gods. Suicide was viewed there with neutrality. In contrast, in ancient Israel, people perceived death as a threat to tribal continuity, and valued life as a treasure from
God. Suicide was considered as a fatal mistake of a human being. In Christian ethics and Christian law, suicide is again defined as a wrong action equivalent to self-murder. In contemporary American society, suicide is illegal and socially unaccepted (Encyclopedia Britannica, 1996).

Sociological Theories About Suicide

Despite the fact that the phenomenon of suicide has attracted attention from social investigators in the past, the idea of suicide did not always have the same meaning that it has in contemporary Western society. The most popular Western theories about suicide are psychodynamic and sociological.

Sociological theory explains the suicide act as rejecting one's self. Pioneer in this field, Emile Durkheim in his book, Le Suicide (1997), wrote: “Suicides do not form, as it might be thought, a wholly distinct group, an isolated phenomena unrelated to other form of conduct, but rather related to them by a continuous series of intermediate causes” (pp.44-45). Thus he hypothesized that the act of suicide of an individual depends on the person's relation to society. The greater socialization and integration - the greater the person's attachment to the society and the greater the attachment forces between the person and society. When bonds between a person and society are weak, risk for suicide is high due to low attachment to the social group.

Based on Durkheim's theory all suicides could be divided on four types: altruistic, egoistic, anomic and fatalistic. For example, altruistic suicides result when the individual takes his own life as a response to societal demands under certain circumstances, such as deaths of Buddhist monks who set themselves on fire to protest the Vietnam War. Egoistic suicide occurs when an individual has slight integration into family life, few ties with society, and also few demands to live; the risk for suicide is high. Anomic suicides take place when the relationship between an individual and society is suddenly changed, such as the shocking, immediate loss of a job or a close friend. Fatalistic suicides derive from regulation when prisoners or slaves kill themselves due to inability to tolerate excessive control.

Psychodynamic theories

Besides Durkheim, other distinguished theorists have discussed the concept of indirect self-destruction. Psychodynamic theories hypothesize that suicide forms under the role of aggression and
internalization of hostility or disappointing relationships. The traditional psychoanalytic position of suicide was stated by Wilhelm Stekel (1950) that in a concept that no one kills himself who has not wanted to kill another or at least wished the death of another. This psychoanalytic position was extended into the formulation idea that suicide represents hostility toward a love object. This conception is similar to Freud’s ideas about suicide. Freud (1955) described suicide as a murderous attack on an internalized significant person.

Karl A. Menninger (1938), developed the concept of the death instinct as a state of balance between the opposing forces of the life and death instincts. According to Menninger, the state of balance of life and death is constantly changing, and that under the influence of diverse patterns of guilt, aggression, and erotism may produce a number of self-injurious behaviors. He hypothesized that drives for suicide are made of three factors: a) the wish to kill, b) the wish to be killed, and the c) the wish to die. Meninger’s theory is still widely used in modern society for the explanation of the phenomena when an individual performs suicide to escape from intolerable situation or intolerable state of mind.

Erik Erickson (1963) hypothesized that growth stages emerge from resolutions of developmental stages. Unsuccessful resolution of a growth stage during adolescence may lead to deficits in various areas of an adolescent’s life such as failure to assume responsibilities, sense of inadequacy in controlling self, inability to compete successfully and difficulties in sharing or experiencing intimate relationships. Unsuccessful resolution may make an adolescent prone to suicide.

Neurobiological theory of suicide.

Biological factors can also increase suicide risk. As was found in the research, diminished function of the neurotransmitter serotonin in the brain affects the individual’s psychological well being. Researchers Mann et. al. (1999) and Pandley (1997) showed this relationship by investigating the cerebrospinal fluid (CSF), neuroendocrine challenge, and blood platelet studies in patients who exhibited suicidal behavior. Low CSF concentration of serotonin metabolite 5-hydroxyindoleacetic acid (5-HIAA) is associated with suicidal behavior. Changes in the serotonergic system and impaired prefrontal cortex serotonergic function was found to result in a decreased ability to resist impulses on suicidal thoughts.
Furthermore, low CSF 5-HIAA have been found in various psychiatric pathologies such as major depression, bipolar disorder, schizophrenia (Mann et. al., 1999).

**Epidemiology of Adolescent Suicide**

In the United States, suicide is the third leading cause of death among youth aged 15-19 years of age (car accidents and homicide are other two). Whereas suicides account for only 1.3% of all deaths in the United States annually, among youth 15-24 years of age, suicide comprises 13.4%. Each year there are approximately 12 suicides for every 100,000 adolescents, and approximately 12 young people between ages of 15 to 24 die each day by suicide. As reported by the American Association of Suicidology (AAS), every hour and 53 minutes a person under the age of 25 completes suicide (AAS, 1999).

The prevalence of suicide attempts among young adults has tripled during the past 25 years (CDC, 1995). A recent large national school-based survey of 16,296 high school students attending grades 9-12 in public and private schools in the 50 states and the District of Columbia, showed that 24.1% of the students reported having serious suicidal ideation; 19% had made a suicide plan, and 8.6% of surveyed adolescents reported making at least one suicide attempt over 1-year period (Simon & Crosby, 2000). The extent of suicidal behavior among youth supports the need for clinicians to routinely assess adolescents and identify those who are at risk for suicide.

**Assessment**

The assessment of suicide remains among the most important, complex and difficult tasks performed by clinicians. Contributing to the difficulty in the assessment of a suicidal adolescent is a growing concern regarding potential liability of the providers either due to adolescent’s noncompliance or discrepancies in the reported data (Bongar, Maris, Berman, Siverman, 1993, Velting, Rathus & Asnis, 1998).

Velting, Rathus and Asnis (1998) investigated the factors that could explain discrepancies in adolescent’s reports of suicidal behaviors. The sample consisted of 48 adolescents who provided histories by completing self-report measures of suicidality. After five days, adolescents were asked to complete the same questionnaires again. The researchers found discrepancies in 50% of the sample and asked
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adolescents to clarify those discrepancies. The results of the research indicated that adolescents were less likely than adults to provide reliable reports of suicidal behavior and were found to be reluctant to disclose personal information to an adult. Also of concern was the fact that adolescents may minimize suicidal ideations or deny self-harm behaviors during the initial contact with the provider. To avoid misconception, clinicians can use empirical methods such as questionnaires which are rapid, inexpensive and efficient methods of gathering information, but they need to clarify answers with an adolescent. As the clinician considers potentially suicidal adolescents, the clinician should assess for the suicide plan with lethality of method to be used, specificity of suicidal plan and availability of the method. (Velting, Rathus & Asnis, 1998).

After identifying a suicidal adolescent, three main components should be included in the assessment: specificity of details, the lethality of the method, and availability of the method. Specificity of suicidal plan means that the person has a definite plan for the time, place, and method of suicide. The lethality of the suicide method indicates how quickly the person would die by using this method. Higher-risk methods include those that usually result in immediate death such as using a gun, jumping, hanging, carbon monoxide poisoning or car crash. Lower-risk methods usually result in more prolonged death and include slashing a wrist, inhaling gas, and ingesting pills. When clinician determines that the method of suicide is available, the person is at high risk for suicide. This what appears to be particularly important in light of recent guidelines by the American Association of Suicidology (AAS) (2000) that lethality assessments should include both estimates of immediate and long-term suicide risks in every suicidal adolescent.

Risk factors

Adolescence is a major life transition. The academic stress and personal investment in the future, coupled with tasks of busy life may place adolescents at an increased risk for suicide attempts. No single factor sufficiently explains and predicts suicide risk. Identifying multiple risk factors of suicidal behavior is the first step in completing the competent assessment of a suicidal adolescent. Early identification of risk factors associated with harmful behaviors in adolescents is a very important predictor
Simon & Crosby (2000) assessed suicide among 16,296 high school students from 155 schools. The data was obtained anonymously using surveys that were self-administered during regular classroom periods. Suicide thoughts, plans, attempts, and the need for follow-up medical care were assessed with a series of questions. Overall, 24.1% of the sample reported having serious suicidal attempts or ideations. Nineteen percent of the sample had made a suicide plan and 2.7% reported a suicide attempt that resulted in injury requiring medical attention. Students who reported attempted suicide were found to have more statistically significant engagement in binge drinking, marijuana use, and cocaine use than adolescents without suicide ideations. More than a half of the surveyed sample reported that they were intoxicated with alcohol and/or used hashish, marijuana, LSD, amphetamines, morphine, and heroin prior to suicidal attempts. The clinician should be extremely alert to the report of an adolescent using recreational drugs or alcohol and should perform a complete suicidal assessment in those individuals (Simon & Crosby, 2000).

Negative Peer Relationships, Poor School Performance, Depression, Hopelessness, Low self-esteem, Negative Life Events and Suicidal Risk.

Negative peer relations were found to be statistically significant in contributing to depression and even suicidal ideation in adolescents by Dori & Overholser (1999). They investigated the relationship of depression, hopelessness, and self-esteem to suicidal behavior in adolescents. The research sample included 90 adolescents with ages from 13 to 18 years old who were recruited from the adolescent unit of a private psychiatric hospital located in a large metropolitan area. Researchers discovered the information regarding suicidal attempts made by adolescents documented in their charts and confirmed it during the structured interview and by questionnaire measures. Adolescents who reported attempted suicide prior to hospitalization had more severe levels of depression, low-levels of self-esteem, and reported the presence of hopelessness. The findings showed that repeated failure in school performance is an important factor that diminishes self-esteem, escalates the feeling of hopelessness and exacerbates depression among young people. Adolescents who have higher levels of hopelessness are at increased risk for repeatedly engaging
A variety of early negative life events have been found to be related to the etiology of suicidal behavior in adolescents in the study of Yang & Clum (2000). These researchers examined the etiology of suicidal behavior in a sample of 181 suicidal and nonsuicidal college students completing assessment measures (Modified Scale for Suicide Ideation). Several assessments including Child Maltreatment Survey (CMS), and the Family Instability Survey (FIS) were directed to recall of events that occurred during childhood.

The findings of the study supported the hypothesis that negative events in childhood impact the cognitive functioning of an individual and may cause suicidal ideations in adolescence. For example, conflict with parents and perceptions of low parental caring and warmth was a good predictor of depressed mood and suicidal ideations in adolescents. Moreover, family instability such as parental separation, divorce, absence or death of one of the family members has been also found related to suicidal behavior. Adolescents with active suicidal ideation tend to have fathers with evidenced low self-esteem, depression, and alcoholism significantly more than adolescents who have not attempted suicide. Mothers of suicide attempters were more often alcoholic and had higher suicidal ideation scores than mothers of the adolescents who had not attempted suicide. Adolescents from families with ineffective communication and problem-solving skills were more likely to model maladaptive responses to stress such as physical violence and emotional abuse toward others. The clinician should perform a very competent assessment of potential suicide in an adolescent experiencing low-parental caring and support (Yang & Clum, 2000).

Physical and sexual abuse or family history of suicide as predictors of suicide.

Yoder (1999) discovered that childhood physical and sexual abuse predicted high incidence of suicidal ideations among adolescents. This study of 527 homeless and runaway adolescents from four Midwest states compared suicide attempters, suicide ideators, and nonsuicidal adolescents. The study found that adolescents who experienced physical or sexual abuse made suicidal attempts much more often than those who had not experienced abuse. In contrast, adolescents with low level of depression and no
sexual abuse were found to have high self-esteem, and no suicidal attempts or suicidal ideations. Negative peer relationships, family conflict, alcohol and drug abuse by adolescents were the strongest predictors of suicidal risk.

The health care provider should be extremely alert to a family history of suicide. Yoder (1999) found that parental suicidal acts or presence of the suicidal history often predisposed adolescents to suicide attempts, threats and behaviors. The author suggests that a history of family suicidal behavior could lead to the adoption of suicide as an acceptable way to deal with stress. This thinking may predispose an adolescent to increased risk for suicidal behavior. Assessment of the family structure and a history of suicidal attempts should become a routine practice for health care providers when they are dealing with adolescents. This contributes to determining the risks associated with the prevalence of suicidal behaviors among youth.

The study of Stepakoff (1998) examined the relationship between suicidal ideation and sexual victimization. A sample of 393 female undergraduate students participated in the study. Participants completed self-report measures of sexual victimization, hopelessness, suicidal ideation, and suicidal behavior. Both childhood sexual abuse and adolescent’s sexual victimization predicted current hopelessness and suicidal ideations. One in four rape victims, in contrast to 1 in 20 nonvictimized students, had engaged in a suicidal act.

Psychiatric Pathology and Suicide.

Research indicates significantly increased coincidence of psychiatric disorders with suicidal behavior in adolescents. Osman et al. (2000) investigated the prevalence of psychiatric disorders among 180 male and female adolescents who were admitted to psychiatric state hospital. The majority of participants were Caucasian. The data was collected via structured interview, psychological reports, and review of medical charts. The current primary psychiatric diagnoses of the study participants were derived from the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and included adjustment disorder, dysthymic disorder, major depressive disorder, conduct disorder, oppositional defiant disorder, and substance dependence disorder. One-third of the participants reported
they did not have current suicidal ideations but had them in the past, another third of the sample admitted having serious suicidal ideations with a plan and the last third reported that they had attempted to kill themselves and really hoped to die.

The findings of Velting, Rathus and Asnis (1998) are congruent with findings of Osman et al. (2000). They studied a sample of 48 female and male adolescents who were recruited from the Outpatient Adolescent Program (ADSP) at Montefiore Medical Center, New York. Following a semistructured interview, the examiner reviewed the self-report of participants and interview-derived responses. The study showed a markedly increased relationship between depression and suicidal ideations in youth. The investigators concluded that 43% of adolescents who engaged in suicidal ideations and attempts reported severe depression prior to suicidal ideations.

Several studies have examined the relationship between malignant personality traits and suicidal risk. Beautrais, Joyce, & Mulder (1999) investigated the development of repetitive self-harmful and suicidal behavior in adolescents. The sample consisted of 129 female and male adolescents who made nonfatal, medically serious suicide attempts. Medically serious suicide attempts were defined as those which required hospital admission. Almost equal numbers of male adolescents (45.7%) and female adolescents (54.3%) made serious suicide attempts. As was found, risk of serious suicide attempt was significantly related to a malignant personality styles. Young people making serious suicide attempt had personality traits of neuroticism, extraversion, impulsiveness, and externalization. Pathological behaviors such as attention-seeking, creating frequent interpersonal conflicts and self-destructive behavior provides a significant link to deliberately dangerous and risky behaviors which may result in a suicide plan. Attention-seeking behavior, self-destructive behavior, and personality factors such as introversion, difficulty expressing emotions, perfectionism, pessimism, dependency, rigidity, and impulsivity should alert the health care professional to perform a complete assessment of suicidal ideations in an adolescent.

Suicide risk in adolescents with conduct disorder and aggression.

Aggressive behavior and related conduct problems were found to be related to suicidal attempts in the sample of 219 homeless adolescents from Denver (Booth & Zhang, 1996). All participants were
offered the Adolescent health Survey, a questionnaire about background and mental health experiences, and the revised version of the Diagnostic Interview for Children. Results of the study showed that more than a half of the sample met the criteria for conduct disorder, and 62% of the sample reported a history of severe aggression which was associated with an attempted suicide. Researchers also found that childhood sexual abuse was associated with a conduct disorder, aggression, attempted suicide, pregnancy, conviction, and arrests. Booth & Zhang (1996) conclude that a competent assessment and systematic treatment of conduct disorder and aggression among youth is needed to reduce the effects of these psychological behaviors and prevent suicidal attempts among the adolescents.

Differences Between Male and Female Suicidal Behavior.

Research findings demonstrate higher frequency of suicide among young males with a male to female ratio 2.7:1 among 10-14 year olds, 4.4:1 among 15-19 years old, and 6.8:1 among 20-24 years old (AAS, 1999). Research data suggests the necessity of realizing differences between female and male adolescents in expression of suicidal behavior. Langhinrichsen-Rolling, Sanders, Crane & Monson (1998) investigated gender and history of suicidality in a sample of 242 college students (120 male and 122 female adolescents). Ninety one percent of this sample was European American, 4.1% were African American, and 1.2% were Hispanic. The remaining participants were Asian Americans (1.2%), and Native Americans or other (2.4%). In the study, two questions were used to assess suicidality: “Have you ever seriously considered suicide? Have you ever attempted suicide?” (p. 131). Also, suicidal and life threatening thoughts of the participants, their feeling and actions were measured with the Life Attitudes Schedule (LAS). The Beck Depression Inventory (BDI) measured depressive symptomatology among the sample.

The results of the study indicated that gender differences influenced the forms and type of methods which males and females adolescents preferred when they engaged in suicidal behavior. Suicidal male students were found to engage more frequently in risk-taking and injury-producing behaviors when compared with female adolescents. In addition, adolescents who were found to be more depressed, said they had fewer reasons for living and reported engaging in more current suicidal and life threatening
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behaviors.

Groholt, Ekeberg, Winchstrom & Haldorsen (1999) also investigated the differences between male and female adolescents. The sample comprised 99 adolescent boys and 30 girls whose deaths were classified as suicide by death certificates, police reports, medical autopsy reports and reports from physicians and hospitals. The majority of both males and females died by violent suicidal methods such as using firearms or hanging themselves (males 81%, females 73%). However, more males were found to be engaged in suicidal behavior that resulted in death whereas females engaged more often in nonfatal suicidal behaviors that allowed them time for discovery and intervention (e.g., drug overdose). Females significantly more often wrote a farewell note.

During the last year prior to suicide, both genders experienced long-lasting stressors such as familial and psychosocial problems and experienced equal number of breakups of romantic relationships. However, males were involved more often in legal or other disciplinary conflicts outside of family. Adolescent girls were found to be more passive in dealing with stressful events than male representatives in the sample. They were likely to show the symptoms of frustration inwardly whereas male adolescents were more prone to acting out behaviorally in expressing their anger. No statistically significant gender differences between the suicidal adolescents were found regarding psychiatric disorders.

Sexual orientation and suicide.

Research indicates an evidence between a suicide or suicidal behavior and sexual orientation in adolescents. Safren and Heimberg (1999) compared the gay, lesbian, and bisexual (GLB) and heterosexual youth recruited from school and educational programs. As was found by the study, gay, lesbian, and bisexual youth reported greater depression, hopelessness, past and present suicidality, fewer positive life events and social supports, and less satisfaction with social support than heterosexual youth. When compared with heterosexual youth (13%), gay, lesbian, and bisexual youth (30%) reported twice as much previous suicidal attempts. Researchers suggest that sexual orientation did not predict current depression, hopelessness, and suicidal feelings. Incorporate this finding into a strategy for prevention of suicide in youth to provide more support and encouragement for an adolescents with an altered sexuality.
Cultural Influence on Suicidal Perceptions Among Adolescents.

Cultural expectations and norms, and personal interpretation of reasons for living were found to be significant in influencing suicidal behavior in adolescents. The relationship between cultural norms and values and suicidal behavior was studied by Harris & Molock (2000) in a sample of 188 male/female African American college students. The students were chosen from a midsize, historically black institution from a Mid-Atlantic state. The presence of suicidal ideations in the students was assessed using the Scale for Suicidal Ideation (SSI), a 19-item self-report scale about suicide. The results of the study indicated that increased family cohesion and family support significantly decreased the presence of suicidal ideations in African-American adolescents. In contrast, students who viewed their family as not cohesive and unsupportive tended to have depression and suicidal ideations. The current data suggest that cultural orientation related to family cohesion and family support may serve as a protective barrier in adolescents against suicide.

Suicide and suicide-related behavior was investigated by Novins, Beals, Roberts & Manson (1999) in 48 culturally different American-Indian adolescents who were recruited from Southwest, Northern Plains, and Pueblo tribes. Overall, adolescents from three tribes were not significantly different in terms of age or gender, but significantly fewer of the Northern Plains adolescents came from a home with both biological parents than adolescents from the other two tribes. The Pueblo youth lived in close communities with strong social networks. The Southwest tribe was characterized by family, community and peer relationships. Also the Southwest tribe had a strong cultural prohibition against even thinking about death. The Northern Plains tribe emphasized individual achievement and more ego-centered conception of death. Because of decreased social network for males in Northern Plains Tribe, more male than female adolescents had suicidal ideations. Thus, among these youth, higher levels of interpersonal stress were associated only among male adolescents. The strong correlation existed between depression and suicidal ideations, low self-esteem, negative life events and problem drinking. In Southwest and Pueblo adolescents six factors were associated with presence of suicidal ideations: a friend who attempted
suicide, life events, low social support, heavy alcohol use, drug use and antisocial behavior.

Prevention of Suicide.

Randell, Eggert, and Pike (2001) evaluated suicide prevention strategies in a random sample of adolescents from 9 to 12 grade. Students were asked to complete the High School Questionnaire, Suicide Risk Screen, Profile of Experiences. These youth were found to have multiple risk factors, family strain, poor school performance and emotional distress. Death of one or both parents was experienced by close to 12% of the sample, 48% experienced parental divorce, and 57% reported having one or more school moves during their middle and high school years. Forty three percent of the sample had suicide risk behaviors. Youth who had a high risk for emotional distress, school strain, and problems with self-efficacy had increased suicidal behaviors. Statistically significant proportion of adolescents who reported suicide, also stated that they will send out clues, especially to people they think of as supportive. Clinicians often fit in this category because they often deal with adolescent in physical and emotional stress.

Clinicians must be aware of the complexity of screening an adolescent for suicide risk. While it is important to screen for presence of mental disorder when determining an adolescent’s risk for suicide attempts, careful inquiry into the background of the youth needs to be done as well. Care of a suicidal adolescent requires planning goals and awareness of an adolescent’s perception and ability to carry out the goals. The clinician should set specific long-term and short-term goals indicating that an adolescent will remain alive by a specific date, and by (date) an adolescent will name two people that she can call if thoughts of suicide recur. The clinician and adolescent should also set a mutual plan to meet with a clinician on a regular basis. The health provider needs to encourage an adolescent to talk about painful experiences and then begin to look at personal strength as well as weaknesses. The clinician should also consider treatment goals that promote family cohesion and family support, and expand family coping skills via referral, counseling and guidance during the crises. Approach to suicidal adolescents may also require a careful consideration of ethnic and cultural differences. Planning of treatment goals, recognizing individual characteristics and abilities of an adolescent will result in an effective suicide
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interventions that will not fail (Randell, Eggert, & Pike, 2001).

Suicide Interventions.

Suicide interventions planned by a clinician can be divided into three distinct areas: primary, secondary, and tertiary. Primary prevention efforts include activities that provide adolescents with support, education, and information. Given the fact that adolescents spend much of their time in school, the most common site for primary interventions are in schools.

Primary prevention

School-based prevention programs.

Miller, Eckert, DuPaul, & White (1999) recommend three school-based suicide prevention procedures. They include suicide-prevention curriculum programs, in-service presentations to school staff, and self-report screening measures. The Centers for Disease Control (CDC, 1992) published a resource guide for implementing prevention programs. The guide recommends that because of lack of evaluation and research on suicide preventative programs, a clinician should not rely on any single prevention strategy. Among the three suicide preventative school-based procedures, curriculum programs are the most widely used approach (Miller, Eckert, DuPaul, & White, 1999). The primary goal of these programs are to heighten awareness among students regarding suicide, to train students to recognize possible signs of suicidal behavior in order to assist others, and to provide students with information about available school and community resources providing assistance. Research has shown that such programs can increase the alertness of adolescents to their potentially suicidal peers (Kalafat & Gagliano, 1996).

The second suicide-preventative strategy, in-service presentations, is similar in content to curriculum programs, except that information is presented to school staff rather than students. Research studies have found that staff education programs can produce positive effects on staff members’ knowledge, attitudes, and referral practices (Jobes et al., 1996).

A third prevention program is effective for identifying suicidal students thorough self-report and interviews. This procedure involves a school- wide or class- wide screening of students using a brief self-report designed to identify adolescents who may be at risk for suicide. Self-Inflicted Injury Form (SIISF)
developed by Potter et al. (1998) could be used as an epidemiological research tool for identifying individuals with high risk for self-inflicted injuries. All students who score above clinically significant levels, then individually interviewed for more precise assessment of suicidal risk. (Miller, Eckert, DuPaul & White, 1999).

**Secondary Interventions.**

Secondary interventions are planned by clinicians during the time of the actual crisis. Secondary interventions are widely practiced in clinics, hospitals, correctional settings, and on telephone hotlines. Since the research indicates that adolescents frequently commit suicide while in the correctional settings, it is important for clinicians to get familiar with suicide precautions in these institutions.

**Prevention of adolescents’ suicide in correctional setting.**

During the last 30 years in the United States, there have been significant advancements in the area of suicide prevention in correctional settings. The American Correctional Association developed a suicide prevention standard, initiated in 1981 and revised in 1990. According to those standards, several policies should be integrated in the management of suicidal patients. First, a written institutional policy became required to ensure special management of the suicidal client (usually in the hospital at 30 minutes interval). Second, actively suicidal inmates are required to be under constant observation by the staff. Third, credentialed mental health staff must approve a written suicide prevention program.

The second major suicide prevention standards come from the National Commission of Correctional Health Care (NCCHC, 1987). These NCCHC standards primarily elaborated the specific health interventions for suicidal inmates. Under the NCCHC standards, the correctional institution is required to have a written plan that specifically outlines identification and intervention procedures in responding to suicidal inmates. Intake and screening procedures must reflect inquiry into suicidal risks and NCCHC standards. These NCCHC standards were revised in 1992 with an emphasis placed on risk-level assessment and corresponding intervention procedures. Level 1 risk includes suicidal inmates who actually made a significant suicide attempt. Supervision of this level inmates should include constant staff watch in a safe and protected room. Level 2-risk is designed for the inmates who are judged to be at high
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risk for suicide based on history and current mental status functioning. The inmate at Level 2 should be housed in a safe room or health clinic with staff observation at 5-minute intervals. Level 3 is reserved for inmates at moderate risk based on suicidal assessment and mental status findings, and need to be observed by staff at 10-minute intervals when awake and 30-minute intervals when sleeping. Finally, Level 4-risk level is designed for inmates with a suicidal risk history but who do not present active intent. In this Level, routine 30-minute staff observations and no isolated housing are recommended. (Bonner, 2000).

**Tertiary Interventions.**

Tertiary prevention can refer to interventions that the clinician needs to plan with family and friends of an adolescent who completed suicide. The most important goal for the tertiary interventions is toward minimizing the traumatic effect of the completed or attempted suicide. Family and friends of an adolescent who completed suicide should be evaluated for suicide risk and referred if appropriate for an individual counseling, family therapy or group therapy.

**Discussion.**

In summary, suicide exacts a tremendous personal and financial loss for the family members as well as for society. In addition to the loss of contributions of the victims, surviving relatives and friends often carry a lifelong burden of self-doubt, guilt, or feelings of responsibility for an adolescent’s action. Examination of the current research reveals that despite the fact, that the majority of suicidal completers communicated the fact of their suicidal plan, they received insufficient attention from health care professionals. This fact stresses the importance of a competent suicidal risk assessment by the health care professional especially in adolescents who use recreational drugs or alcohol, experience physical or emotional instability, and low parental caring, psychiatric disorders or low self-esteem and hopelessness (Osman et al., 2000, Simon & Crosby, 2000, Yoder, 1999, Stepakoff, 1998, Silverman et. al 1997, Mazza & Reynolds, 1998). The presence of psychiatric disorders such as adjustment disorder, dysthymic disorder, major depressive disorder, conduct disorder, and oppositional defiant disorder in adolescents should alert the provider to assess them for suicide risk. Health care provider should be extremely alert to identify risks factors for suicide in every adolescent that comes for services (See Table 1 for Summary of
Suicide risks.

A clinician should seriously address the possibility of suicidal issues in young people with personality traits of neuroticism, extraversion, impulsiveness, and externalization and pathological behaviors such as attention-seeking, creating frequent interpersonal conflicts and self-destructive behavior. Attention-seeking behavior, self-destructive behavior, and personality factors such as introversion, difficulty expressing emotions, perfectionism, pessimism, dependency, rigidity, and impulsivity should alert the health care professional to predict a self-harmful behaviors in those adolescents (Beautrais, Joyce & Mulder, 1999). Finally, risk behaviors are influenced by personal characteristics, which may include an alternative sexual orientation and thus require an individual approach and an increased support to gay, lesbian and bisexual youth (Safren & Heimberg, 1999).

The results of research indicated that gender differences influence the forms and type of methods which males and females adolescents prefer when they engaged in suicidal behavior. The clinician should be very alert to male adolescents who are depressed since male adolescent were found to engage more in risk-taking and injury-producing behaviors when compared with female adolescents (Groholt, Ekeberg, Winchstrom & Haldorsen, 1997, Mazza & Reynolds, 1998).

As the clinician considers potentially suicidal patients, he or she should assess suicidal adolescents for the suicide plan with lethality of method to be used, specificity of suicidal plan and availability of the method. (Velting, Rathus & Asnis, 1998). Assessment of the family structure and a history of suicidal attempts should become a routine practice for health care providers when they are dealing with adolescents. The health provider should perform a very competent assessment of suicide in an adolescent experiencing low-parental caring and support (Yang & Clum, 2000). This contributes to determine the risks associated with the prevalence of suicidal behaviors among the youth (Yoder, 1999).

The cultural heterogeneity in the United States suggest that additional information about the prevalence, consequences, and correlates of suicide perception among a particular group of adolescents needs to be incorporated in the development of screening procedures and prevention strategies. The research data suggests that cultural orientation related to family cohesion and community support may
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serve as a protective barrier in adolescents against suicide (Harris & Molock, 2000). Research should continue to examine the views and capabilities of community resources directed to help distressed adolescents.

More information should be developed nationwide to educate and assist people in the community to recognize and deal with a suicidal youth. For example, the study of Thompson, Eggert, & Herting (2000) explored an intervention program for 106 adolescents who were identified as high-risk for suicide. This program was directed toward increasing personal relationships between an adolescent and peer group support. The results provided by the study supported the fact that group support is critical for building a positive peer group culture, and particularly important for increasing self-esteem in an adolescent who is at high-risk for suicide. Moreover, peer social support significantly reduced suicidal behavior among high-risk adolescents. Such programs will be an implementing step in problem of adolescent’ suicide.

Adolescence is a time of experimentation. Adolescents experiment with healthy and unhealthy behaviors that can either be discarded or retained as long life habits. Caregivers, therapists, health providers and other health care professionals need to incorporate the available research findings on etiology, epidemiology and suicide prevention to achieve the highest standard of dealing with suicidal behavior in young adults. These research findings should provide direction for health providers, educators and mental health workers to develop services to maximize the current physical and mental health of our adolescents. The primary goal of care provider interventions should be directed toward implementing preventative programs designed to increase awareness among students regarding suicide, teach students to recognize possible signs of suicidal behavior in order to assist others and provide the information about available school and community resources. (Miller, Eckert, DuPaul, & White, 1998). Research has shown that such programs can increase the alertness of adolescents to their potentially suicidal peers (Kalafat & Gagliano, 1996). By teaching an adolescent correct responses to stress, mobilization of support from the family, and use of other resources, the health care provider can prevent an adolescent’s suicide and develop a holistically approached health promotion plan (Table 2).
Table 1

SUMMARY OF SUICIDAL RISKS IN ADOLESCENTS.

- **S** - suicidal attempts in the past, school performance problems, separation from family, friends.
- **U** - unsupportive environment (family, school)
- **I** - injury-producing behavior
- **C** - conduct disorder, conflicts with parents or legal system
- **I** - impulsivity, introversion, internalization of anger
- **D** - drug/alcohol abuse, depression, dysthmic disorder
- **E** - extroversion, emotional problems
- **R** - risky behavior
- **I** - intent to harm others
- **S** - self-esteem problems, stress, self-guilt
- **K** - knowledge deficit of support system
Table 2

SUICIDE INTERVENTIONS

Primary intervention

• School-based programs, community programs

Secondary intervention

• Education in clinics, hospitals, correctional settings, and telephone hot lines.

Tertiary interventions

• Family/individual therapy
References.


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matched controls. *Suicide and Life-Threatening Behavior*, 27(3), 250-263.


