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## Youth and Student Suicide

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*Chapter 2*

## YOUTH AND STUDENT SUICIDE

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### INTRODUCTION

Suicide is the 11th leading cause of death across the lifespan in the USA, third cause of death in 15-24-year-olds and fourth cause of death in 25-44-year-olds (Minino, et al., 2006). Youth, defined herein as people between the ages of 18 and 25, fall within the above two age ranges as defined by the categorization of USA statistics (Centers for Disease Control, 2003), indicating that suicide is the third or, at best, fourth leading cause of death within the youth age group. Suicide in youth has been estimated to reach its peak between the ages of 19 and 23 (Shaffer, et al., 2001) or between the ages of 18 and 24 (World Health Organization, 1999).

In 2003, the suicide mortality rate for 20-24-year-olds was 12.1 per 100,000, a slight decrease from 2002 which had 12.4 suicides per 100,000 (National Center for Health Statistics, 2006). In 1999, in the USA, almost 60% of youth suicide deaths occurred among those 20 to 24, indicating that what is often described as “youth suicide” is actually suicide in young adults (Beautrais, 2003).

Eighteen to 25-year-olds represent youth who will and will not attend college. Studies have shown differing statistics regarding whether noncollege young adults or college student young adults are more likely to commit suicide. Some authors (Reynolds, 1991) have reported that the average level of suicidal ideation experienced by college students is higher than that experienced by same-age young adults in the community. College student surveys have shown that as many as 50% of students admit to suicidal thoughts in the last year, with 8%-15% acting on those thoughts (Brener, et al., 1999). Suicide has been estimated to be the second leading cause of death among college students (Barrios, et al., 2000).

Other studies challenge the claim of a higher suicide rate among college students compared to noncollege peers when reported figures are scrutinized statistically (Lipschitz, 1990). In a comprehensive attempt to compare the incidence of suicide among college

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students to a matched national sample of noncollege peers, Silverman, et al. (1997) found that, for the 10-year period studied, college students had one-half the suicides of the noncollege sample (7.5 vs. 15 suicides per 100,000, respectively). They concluded that their findings supported those of others who found a lower overall suicide rate in college students versus the general population (Schwartz, 1990; Schwartz and Whitaker, 1990).

An under-represented group of young adult suicides, however, includes those who drop out of college and are not counted as college suicides. Haas, et al. (2003) noted that an elevated rate of suicide among college drop-outs has long been known. For example, a longitudinal study of 50,000 students (Paffenbarger and Asnes, 1996; Paffenbarger, King, and Wing, 1969) found failure to graduate associated with a 50% greater risk of suicide. Later analysis of these data (Arnstein, 1986) found evidence that students drop out of college before committing suicide. These uncounted college-related suicides artificially lower the rate relative to the general population (Haas, et al., 2003), indicating that rates of college and noncollege young adult suicides may be comparable.

## **RISK FACTORS**

Risk factors for suicidal thinking and behavior in young adults have been categorized in many different ways. Herein they are categorized by Personal/Individual Characteristics, Family Characteristics/Psychopathology, Negative Life Stressors/Environmental Influences, and Developmental Issues.

### **PERSONAL/INDIVIDUAL CHARACTERISTICS**

#### **Psychiatric Co-Morbidity**

Psychiatric disorders have been shown to play a major role in youthful suicidal behavior (Beautrais, 2003), and up to 90% of completed suicides have at least one disorder at the time of death (Houston, et al., 2001; Shaffer, et al., 1996). Furthermore, those with multiple or comorbid mental disorders have an elevated risk of suicidal behavior compared to those with no disorder (Shaffer, et al., 1996). Beautrais (1996) estimated that young people with a single disorder were 8 times, and those with two or more disorders were 15 times more likely than those with no disorder to attempt suicide.

Mood disorders (i.e., major depression and bipolar disorder) have been shown to produce significantly elevated risks of suicidal behavior in college students (Dean and Range, 1996; Lester, 1999) with depression being the most common diagnosis among young adults who have attempted or completed suicide (Langhinrichsen-Rohling, et al., 2004). Substance abuse has also been associated with suicidal behavior (Shaffer, et al., 2001), and studies have found evidence of alcohol/substance abuse in 38 to 54% of youth suicides (Miller and Glinski, 2000). Abel and Zeidenberg (1985) found that 35% of their sample of 15-24-year-old suicides had medical records indicating significant blood alcohol levels at the time of death.

Externalizing disorders (i.e., conduct disorder, oppositional defiant disorder and antisocial personality disorder) have significant correlations with suicidal behavior in young

people. Shaffer, et al. (1996) found that those with conduct disorder had 3 times the probability of suicide than those without such disorder. Anxiety disorders have also been shown to have a small, but significant association with suicidal behavior in youth (Beautrais, 2003), and those with psychotic disorders are at high-risk for suicidal behaviors. However, since these disorders affect relatively few young people, they make a small contribution to overall rates of suicidal behavior in this population (Beautrais, 2003).

### **Personality Correlates**

A number of studies have looked at personality characteristics associated with suicidality in young adults. Among the characteristics found to be associated are dependency and self-criticism (Fazaa and Page, 2003), high scores on measures of neuroticism (Chioqueta and Stiles, 2005) and hopelessness (Shaffer, et al., 1996), and positive attitudes toward suicide (Gibb, et al., 2006; McAuliffe, et al., 2003).

### **Genetics**

A strong predictor of suicidal behavior in young people is the presence of a family history of suicidal behavior (Mann, et al., 2001), suggesting a genetic component to suicide. Twin studies have shown moderate levels of heritability in which up to 45% of variance in suicidal behavior may be genetic (Statham, et al., 1998). Researchers are also attempting to identify marker genes, with a particular focus on those involving the serotonergic system. However, these studies remain inconclusive (Gould, et al., 2003).

### **Gender**

Being male places one at a much higher risk for a completed suicide. While females attempt suicide much more frequently (Shaffer, et al., 2001), among 20-24-year-olds, the ratio of male to female completed suicide is greater than 6:1 (National Center for Health Statistics, 2006). Method of suicide also varies between genders, with ingestions accounting for approximately 16% of 15-24-year-old female suicides, but for only 2% of suicides in males. Males are much more likely to use firearms (Shaffer, et al., 2001). In 2003, the male to female ratio of firearm use for suicide was 11.4 to 1.2 per 100,000, respectively (National Center for Health Statistics, 2006).

### **Sexual Orientation**

Research has shown that young people who identify as gay, lesbian, or bisexual (GLB) are twice as likely to have a history of suicidal behavior as their heterosexual peers (Russell and Joyner, 2001). Stressors associated with suicidal behavior in this population include interpersonal turmoil associated with publicly acknowledging one's sexual identity, especially

to parents (D'Augelli, et al., 2001), and discrimination and victimization related to sexual orientation (Cochran, 2001).

A recent study showed that primarily heterosexual college students did not respond empathically to GLB's suicidal behavior following a negative response from parents to "coming out," in contrast to their empathic response to suicidal behavior in someone informed about an incurable illness (Cato and Canetto, 2003). These results suggest that young heterosexual adults may not be accepting of gay lifestyles.

### **Prior Suicide Attempts**

Previous suicide attempts predict higher probability of future suicide attempts (Gould, et al., 2003; Shaffer, et al., 2001). Estimates have ranged from 18%-50% for those completed suicides with a past attempt (Rudd, et al., 1996), indicating wide variability in studies regarding numbers of attempters who complete suicide. Rudd, Joiner, and Rajab (1996), in an effort to bring clarity to the issue of which attempters become completers, divided their sample into ideators, attempters, and multiple attempters. These authors found that multiple attempters showed more severe symptoms and elevated suicide risk relative to both ideators and attempters. A more recent study (Joiner, et al., 2005) looked at four different samples, differing in age, clinical severity and gender, and found that past to current suicidality was direct and not accounted for by covariates, indicating that past suicidality may be a causal factor in future suicidality.

## **FAMILY CHARACTERISTICS/PSYCHOPATHOLOGY**

Parental psychopathology, depression, and substance abuse (Gould, et al., 1996; Pfeffer, et al., 1998) all contribute as risk factors for youth suicide. Parental or family discord and/or parental separation or divorce (Fergusson, et al., 2000) have an impact as well.

## **NEGATIVE LIFE STRESSORS/ENVIRONMENTAL INFLUENCES**

Negative life events have been shown to be related to suicidality in youth (Joiner and Rudd, 2000). A history of physical and/or sexual abuse during childhood (Beautrais, et al., 1996; Brown, et al., 1999) has also been associated, with sexual abuse being more significant. Brown, et al. (1999) estimated that between 16.5% and 19.5% of suicide attempts in young adults may be due to child sexual abuse. Other forms of childhood maltreatment have also been shown to be risk factors (Gratz, 2006).

Environmental factors that influence suicidality in youth include media-generated contagion. Schmidtke and Hafner (1988) and Hawton, et al. (1999) found an increase in suicides and an increase in the depicted method of suicide following suicides shown on television. Adolescents and young adults appear to be most easily affected by media contagion, with only minimal effects after the age of 24 (Gould, et al., 2003).

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## DEVELOPMENTAL ISSUES

Whether youth 18-25 years old are college students or members of the general population, this developmental stage of life presents multiple challenges, including the need to accomplish independence and individuation while maintaining connectedness to family, the development of intimate relationships, and the pursuit of personal and career goals (Mowbray, et al., 2006). These tasks may provide a level of stress that will precipitate suicidal thinking and behavior. Additional stressful tasks for college students include the pressure of academic endeavors, while their noncollege peers must establish a work ethic upon which to build their lives.

## PREVENTION AND INTERVENTION

Studies indicate that the best way to prevent suicide is through early detection and treatment of depression and other psychiatric illnesses that increase suicide risk. Beautrais, et al. (1996) found evidence that the elimination of mood disorders would result in reductions, up to 80%, in the risk of a serious suicide attempt. Other data support that claim as well (Goldney, 2005). This is not to imply that factors other than mood disorders are unimportant in suicidal risk, but adequate recognition and treatment of mental disorders are good first steps toward suicide prevention (Goldney, 2005).

For college students, campus mental health services must be enhanced and adequately staffed to ensure the best outcome for those with mental health problems. Past-year prevalence of mental illness is highest (39%) for youth ages 15-21, suggesting that college students have a high level of psychological distress that may lead to suicide (Mowbray, et al., 2006). Post-attempt interventions are also necessary and may include cognitive therapy, dialectical behavior therapy and pharmacological approaches (Goldney, 2005).

Prevention of suicide may often depend upon front-line professionals who see suicidal youth. These professionals will likely not be mental health professionals, so primary care physicians and others who have substantial contact with youth need to be aware of and screen for suicidal ideation. Such assessment needs to occur before a suicide attempt as well as afterwards. A number of studies show that deliberate self-harm patients who presented to emergency rooms and left without a psychosocial and/or psychiatric assessment were more likely to engage in subsequent self-harm (Hickey, et al., 2001; Kapur, et al., 2002). Thus, prevention of suicide must include intervention regarding the precursors of the ideation, intention and behavior, as well as continued assessment and treatment subsequent to a suicide attempt.

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