

Understanding Suicide: What Therapists Should Know

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ABSTRACT. Because suicide has become a significant public health concern in the United States (and internationally), occupational therapists who work with psychiatric populations—particularly adolescent and geriatric populations—should enhance their understanding of suicidal behavior, their ability to assess suicidal ideology in patients, and their awareness of effective prevention and treatment methods. This paper reviews the demography, risk factors, and biological underpinnings of suicidal behavior. The high correlation between psychiatric conditions—particularly the mood disorders, personality disorders, anxiety disorders, and schizophrenia—and suicidal behavior is examined. Prevention and treatment methods are suggested. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2005 by The Haworth Press, Inc. All rights reserved.]*

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Between 30 and 35,000 people kill themselves every year in the United States, and nearly half a million make a suicide attempt serious enough to require medical treatment (Maris, 2002). In a survey of over 5,000 Americans, the National Comorbidity Survey, it was found that

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over 14% had experienced suicidal thoughts and 4.6% had made at least one significant suicide attempt (Kessler, Borges, & Walters, 1999). It is estimated that one million people die worldwide from suicide each year, and between 10 and 15 million suicide attempts are made annually (Jacobsson & Renberg, 1999; Maris, 2002). Some studies suggest that for every completed suicide there are an estimated 10 to 25 suicide attempts; many people who attempt suicide do so more than once (Maris, 2002; Satcher, 1998).

In 1995, the United States Surgeon General reported that deaths by suicide in America outnumbered deaths by homicide, making suicide a significant public health concern (Satcher, 1998). While suicide has been identified as a major public health crisis, public understanding of suicide has not correlated with the increase in medical and psychological research regarding suicide. Well-identified risk factors predisposing people to suicidal behavior include genetic heredity, the presence of mental health problems, addictions, a history of previous suicide attempts, a family history of completed suicide, a history of severe childhood sexual abuse, irregular or inadequate psychiatric care, feelings of hopelessness, and impulsive and violent personality traits (Hiroeh, Appleby, Mortensen, & Dunn, 2001). Certain life events or circumstances may interact with these predisposing vulnerabilities to heighten the risk of suicidal behavior: relationship failures, economic and employment setbacks, legal difficulties, terminal or debilitating illnesses, and perceptions of severe personal humiliation (Kessler et al., 1999).

GENDER DIFFERENCES

In the United States, women are two to three times as likely as men to make a suicide attempt, while men are four times as likely as women to complete suicide (APA, 1994; Jamison, 1999). This imbalance may relate to the finding that adolescent and adult females are twice as likely as men to experience depression. It may also relate to research suggesting that women are less likely than men to use violent methods when attempting suicide. Women's use of relatively safer methods heightens their chances for surviving suicide attempts. Men—particularly those who have an aggressive, volatile component to their psychological problems—are also less likely to seek psychiatric help. Men also add to their suicide risk through their greater use of alcohol and drugs, and their higher gun possession rate (Kessler et al., 1999).

YOUTH AND OLD AGE

Old age—particularly if marked by the presence of a terminal or debilitating illness, and lack of social support—is another risk factor for suicide in the general population. Studies repeatedly show that the elderly are inadequately diagnosed and treated for depression—the major cause of suicide in all age groups (“Burden of Illness,” 2002; Nordberg, 2002). The high incidence of suicide in the elderly is largely associated with one group—white males over the age of 50. This group accounts for 10% of the population, but 30% of completed suicides. It is suggested that the high rate of suicide among this group may be related to depression, lack of social integration, sleep disturbance, diminished cognitive function, access to lethal means (such as guns), and inattention among health care professionals (Glogoski-Williams, 2000; “Why So High,” 2002).

It is estimated that suicide in the young (ages 15 - 30) has tripled over the last 45 years. Suicide has become the third leading cause of death in young people in the United States and the second for college students (Anderson et al., 2001; Evans, Marte, Betts, & Silliman, 2001; Keith, 2001; Zametkin, Alter, & Yemini, 2001). In a survey by the Centers for Disease Control (1998) it was found that one in 10 college students had seriously considered suicide and had gone so far as to draw up a plan. One in five high school students also reported having considered suicide and had created a plan. One in ten high school students actually attempted suicide; one in three suicide attempts were serious enough to require medical attention.

Since the 1950s the rate of suicide in the young has steadily increased throughout the world (Anderson et al., 2001; Centers for Disease Control, 1998). A percentage of this increase may result from more accurate reporting of suicide rates—that is, coroners and medical examiners now more accurately attribute questionable teenage deaths to suicide rather than to accidents. Earlier and easier access to guns, alcohol, and drugs may also account for this increase (Evans et al., 2001). Another explanation for the increased youth suicide rate may relate to the decreasing age of puberty. The average age of puberty has sharply decreased over the last several decades, from 14 to 11.5 years of age. Depression and other forms of mental illness tend to first occur at or after the onset of puberty. It is suggested that the declining average age of puberty has resulted in a decrease in the average age at which mental illness first appears in the general population (Jamison, 1999). There is evidence that

the rate of depression in the general population has also increased over time (Zametkin et al., 2001).

It is generally believed that suicide is rare before the age of 12. Only 1% of all suicides occur in the first 15 years of life; however, 25% occur in the second 15 years. Major psychopathology (e.g., mood disorders, alcohol and drug abuse, psychotic illness, and personality disorders) tends to be uncommon in very young children—although recent research has found a rise in the childhood incidence of certain psychiatric disorders in the last two decades (Jamison, 1999). Severe psychiatric disorders are more likely to occur after the onset of puberty. The average age of onset for major depression is 26; for manic depression, 18; for schizophrenia, 15 to 20; and for alcohol and drug abuse, 21 (APA, 1994).

THE LINK BETWEEN PSYCHIATRIC DISORDERS AND SUICIDE

The most common factor in suicide is the presence of some form of psychopathology. Of the psychiatric disorders, several disproportionately predispose people to suicidal behavior: the mood disorders (most notably, major depression and bipolar disorder), schizophrenia, borderline and antisocial personality disorders, anxiety disorders, and alcohol and drug abuse (Hiroeh et al., 2001). It is estimated that 90 to 95% of people who attempt or complete suicide have a diagnosable psychiatric illness (Haw, Hawton, Houston, & Townsend, 2001).

Of the differing classifications of major depression, the most severe is recurrent or chronic episodic depression—a particularly virulent type of depression characterized by repeated episodes that tend to increase in frequency over time. APA (1994) reports that an estimated 15% of people diagnosed with major recurrent depression die by suicide. More recent sources raise that estimate to 30 to 50% (Soloff, Lynch, Kelly, Malone, & Mann, 2000). People with major depression are 20 times more likely to complete suicide than an individual in the general population. In its severe form, recurrent major depression paralyzes the person, leaving a hopeless, despairing state accompanied by intense fatigue and often agitation. One's thought processes tend to become confused, vacillating, ruminative, and self-castigating. Sleep is often disrupted, leaving the individual with little ability to sleep or an excessive need to sleep. As mentioned above, women are two to three times as likely as men to experience major depression. It is estimated that 20% of the pop-

ulation experiences major depression at any one time in the life span (APA, 1994).

Bipolar disorder (or manic depression) is characterized by alternating periods of mania and depression—each period lasting for approximately three to six months. While bipolar disorder is less common than major depression, one person in 100 experiences the more severe form of the illness; another two to three have milder variations. Bipolar disorder occurs in men and women equally. Generally, bipolar disorder is more severe than major depression, recurs with greater frequency, and is also more likely to be accompanied by drug and alcohol abuse—nearly two-thirds of those with bipolar disorder have a serious substance abuse problem, compared to one fourth of those with major depression (APA, 1994; Baxter & Appleby, 1999). Approximately 50% of people with bipolar disorder attempt or complete suicide; bipolar disorder increases the risk that an individual will complete suicide by 15%, compared to the general population (Soloff et al., 2000).

Mixed states—the simultaneous occurrence of depression and mania—commonly occur in bipolar disorder. The mix of depressed mood, morbid thinking, agitation, irritability, disrupted sleep, paranoia, and sometimes violence can be a potent constellation heightening the risk of suicide. It is the mixed state that predisposes one to suicide; mania alone rarely induces suicidal ideation (Baxter & Appleby, 1999; Soloff et al., 2000).

Mood disorders, when combined with alcohol and drug abuse are the most common psychiatric conditions associated with suicide. It is estimated that alcohol and drug abuse that accompanies psychopathology heightens the likelihood of suicide attempt and completion by 75%. The severity of a mood disorder is far more predictive of suicide when it is coupled with alcohol and drug abuse, physical and mental agitation, significant emotional upheavals, and losses and life disappointments (Henriksson et al., 1993).

Schizophrenia is the most severe of the psychiatric disorders that are often associated with high suicide rates. Like bipolar disorder, the onset of schizophrenia typically occurs in late adolescence and early adulthood. Approximately one in 100 people are diagnosed with the disorder. Similar to the mood disorders, schizophrenia can have devastating effects on relationships, educational plans, and personal goals. Alienation from family and friends is common. If untreated, the disorder usually worsens over time. It is estimated that 30 to 40% of people with schizophrenia attempt and/or complete suicide (Pompili, Mancinelli, & Tatarelli, 2002). As with the mood disorders, a history of a prior suicide

attempt is the single best predictor of a subsequent attempt. Schizophrenia is characterized by apathy, a blunted affect, and an erosion of the higher executive functions. Hallucinations and delusions are common phenomena. One in four people with schizophrenia also experiences depression, irritability, and restlessness—factors that increase the risk of suicide (APA, 1994).

The anxiety disorders—particularly when combined with panic attacks or severe depression—disproportionately predispose people to suicidal behavior. The symptoms of anxiety disorders include excessive worry, disturbed sleep, muscular tension, irritability, fatigue, agitation, and restlessness. These symptoms tend to be long-standing features of an affected person's life. Very often, anxiety and depression occur co-morbidly (APA, 1994).

Panic attacks are also associated with an increased risk for suicide. Panic attacks are isolated episodes of intense fear and discomfort, accompanied by a sudden onset of a constellation of unpleasant physical and mental symptoms including palpitations, sweating, shaking, shortness of breath, chest pain, and an extreme fear of impending danger or personal threat. When panic attacks occur with great frequency they can induce a sense of despair and hopelessness. Panic attacks can also elicit a self-imposed social isolation in an attempt to avoid the situations that may trigger the attacks (Ayd & Daileader, 2000).

The two personality disorders that result in a disproportionate number of suicides are borderline and antisocial personality disorders (Bronisch, 1996; Paris & Zweig-Frank, 2001). Borderline personality disorder is characterized by tumultuous relationship patterns; impulsive, self-destructive behaviors; an unstable job history; extreme fear of abandonment; rapid mood cycling; physically self-injurious behavior; and suicidal ideation (APA, 1994; Kernberg, 2001; Kjellander, Bongar, & King, 1998). Antisocial personality disorder commonly has its roots in a childhood conduct disorder. Characteristics of antisocial personality disorder include lack of empathy, disregard for the rights and feelings of others, aggression and physical cruelty, pathological lying, and an inability to feel remorse (APA, 1994; Bronisch, 1996).

The common characteristics of both borderline and antisocial personality disorders probably contribute to their increased association with suicide attempt and completion. The instability of mood and behavior, coupled with manipulative behaviors, portend combative relationships, a solitary emotional life, and employment disruption. When these unstable personality traits are exacerbated by depression or substance abuse, the risk of suicide increases by 25%. Nearly 75% of peo-

ple with borderline or antisocial personality attempt suicide at least once (Paris, 2002; Paris & Zweig-Frank, 2001).

Severe childhood sexual trauma also appears to heighten the risk for suicide attempt and completion. Childhood sexual trauma—particularly in cases of incest or prolonged sexual abuse—is highly associated with the subsequent development of both borderline personality disorder and major depression (Brodsky, Oquendo, Ellis, Haas, Malone, & Mann, 2001; Dube, Anda, Felitti, Chapman, Williamson, & Giles, 2001). Soloff, Lynch, and Kelly (2002) found that the risk of suicide increased by 10% in patients with borderline personality disorder and a history of depression and childhood sexual abuse.

Researchers have found that the personality disorders—particularly borderline personality disorder—tend to improve over the life course. The suicide risk for this group may be highest in the earlier years of life when the symptoms of the disorder appear to peak. Suicide risk tends to decline if the person is able to survive the tumultuous early decades and settles into a period of relative calm in the fourth and fifth decades of life (Sabo, Gunderson, Najavits, Chauncey, & Kisiel, 1995).

When any of the above disorders occur co-morbidly, the risk of suicide is greatly heightened. Combined with a psychiatric condition, substance abuse increases the likelihood of suicide more dramatically. Alcohol and drugs, used to alleviate the pain of a psychiatric condition, commonly worsen it. Substance abuse can exacerbate the overall course of a psychiatric illness, can precipitate acute episodes of psychosis, can sabotage a person's willingness to seek treatment, can undermine the effectiveness of prescribed treatments, and can increase risk-taking behaviors and impulsivity that often underlie suicide attempts (Preuss et al., 2002).

The above psychiatric disorders—major depression, bipolar disorder, schizophrenia, anxiety, personality disorder, and substance abuse—commonly have a deleterious effect on a person's ability to establish and maintain relationships, engage in meaningful and financially stable work, and maintain the will to live. The acute awareness of harm done by severe psychiatric illness—to the person and to loved ones—and the fear that the illness may return, often precipitate many suicides. People who have achieved success both socially and academically when young, and who then experience a severe mental illness such as schizophrenia or bipolar disorder, seem particularly vulnerable to the pain of their own mental deterioration and to the idea of living with a chronic, debilitating illness (Jamison, 1999). These people often experience a turbulent loss of personal goals and the recognition of harm to family, friends, and to one-

self. For many people with chronic episodic major depression, bipolar disorder, or schizophrenia, the recurrence of the illness after a period of wellness becomes unendurable (Baxter & Appleby, 1999).

BIOLOGICAL UNDERPINNINGS

There is compelling evidence that the psychiatric disorders associated with suicidal behavior have a genetic and neurochemical basis. Family studies of suicide have found a significantly elevated incidence of suicidal behaviors in the family members of those who attempt and/or complete suicide. People who complete suicide are two to three times as likely to have a family history of suicide as those who do not complete suicide (Brent, Bridge, Johnson, & Connolly, 1996; Pfeffer, Normandin, & Kakuma, 1994; Statham et al., 1998). Roy, Segal, and Sarchiapone (1995) found that 40% of identical twins whose co-twin had completed suicide, also attempted suicide. Roy et al. also found that if one member of a non-identical twin completed suicide, the suicide rate for the co-non-identical twin was barely 1.5%. Similarly, two studies in Denmark—a country that has maintained comprehensive medical records for decades—found a much higher rate of suicide in the biological parents of adoptees who completed suicide, than in the adoptive parents (Wender, Kety, Rosenthal, Schulsinger, Ortmann, & Lunde, 1986).

Several studies have also suggested that highly intelligent and creative people are much more likely than the general population to experience major depression and bipolar disorder; the extremely intelligent and creative appear to be disproportionately affected by these conditions. Researchers suggest that scientists, musicians, artists, writers, and highly successful business people may be five times as likely to kill themselves as the general population (Ludwig, 1995).

Recent research has also begun to find neurotransmitter abnormalities in the brains of individuals who attempt and/or complete suicide. The neurotransmitters serotonin, norepinephrine, dopamine, and GABA play roles in the origin of mood disorders. Drugs that influence these neurotransmitters can induce or ameliorate depression and mania (van Heeringen, 2001).

Abnormalities in the serotonin system have been strongly implicated in the roots of depression, sleep disturbance, aggression, and suicidal behavior. A decreased availability of serotonin in the brain is associated with impulsivity, aggression, violence, and suicidal behaviors. One of the most replicated findings in psychiatric research is the connection be-

tween suicide risk and low levels of 5-hydroxyindoleacetic acid (5-HIAA)—serotonin's breakdown product. 5-HIAA is a metabolite that is believed to reflect serotonin function in the central nervous system. Low concentrations of 5-HIAA in the cerebrospinal fluid (CSF) have been linked to high suicide risk. When CSF 5-HIAA is measured in patients with mood disorders after a suicide attempt, those with very low concentrations of the serotonin metabolite are far more likely to complete suicide within one year compared to those with higher levels (Spreux et al., 2001).

Abnormalities in the serotonin system have also been found in post-mortem studies of the brains of people who have completed suicide. Reduced serotonergic function has been identified in the prefrontal cortex and in the hippocampus (New et al., 2001; Rosel et al., 2000). The prefrontal cortex is the seat of the higher executive functions. Pathology of the serotonin system in this area of the brain may lead to disinhibition and impulsivity—which may induce the individual to act impulsively on suicidal thoughts. Researchers have documented that while many suicidal patients have well-formulated plans, the final timing and decision to act upon those plans are commonly carried out impulsively (van Heeringen, 2001). Reduced serotonergic function in the hippocampus (the long-term memory storehouse of emotionally significant events) may cause the person to ruminate excessively over negative memories—a common characteristic of depression in which one's perspective becomes dominated by negative interpretations of the past, present, and future (Keilp, Sackeim, Brodsky, Oquendo, Malone, & Mann, 2001).

The amount of noradrenergic neurons in the brains of people who completed suicide has also been found to be significantly depleted. This finding suggests the existence of pathology in the norepinephrine system—a neurotransmitter implicated in depression, sleep regulation, attention and learning, and the sleep-wake cycle (Gonzalez, Rodriguez, Meana, Garcia, & Guimon, 2002).

Autopsy studies of people who have completed suicide have also revealed abnormal hyperactivity in the hypothalamic-pituitary-adrenocortical axis (HPA axis). The hypothalamus, pituitary, and adrenal glands produce chemicals that regulate the stress response. Under normal circumstances, the release of stress hormones (e.g., cortisol and adrenaline) increases heart rate, suppresses hunger, and circulates more oxygenated blood to the muscles. Some researchers suggest that with each depressive and/or anxious episode, the HPA axis is primed for overactivity. As one continues to experience depressive episodes and/

or anxiety attacks, the threshold required to turn on the HPA axis precipitously decreases (Duval et al., 2001; Hiroi et al., 2001).

DIURNAL AND SEASONAL PATTERNS

International research has demonstrated that suicide is positively correlated with the earth's seasonal variations and diurnal patterns. Most suicides occur between 7:00am and 4:00pm. In the hospital setting, suicide tends to be carried out early in the day—between 5:00am and 7:00am. While a component of this phenomenon may be related to the level of activity on hospital wards and the availability of staff, it more likely reflects the well-established diurnal pattern that exists in mood disorders—whereby mood tends to be reported as severe in the morning and commonly improves as the day progresses (Moffot et al., 1994).

The seasonal variation in suicide tends to be one of the most consistent findings in international psychiatric research. Late spring and summer are the peak months for suicide attempts and completion, worldwide. This likely relates to the finding that many depressive episodes begin in the fall and winter months but reach their maximum severity in the spring. A second, but less common, period of high depression rates occurs in the summer months (Chew & McCleary, 1995).

THOUGHT PATTERNS OF SUICIDAL IDEATION

Neuropsychologists have found a common constellation of cognitive thought patterns in people who have made suicide attempts: thinking slows, distractibility increases, attention and concentration wane, and memory problems are heightened. When people are suicidal their thinking can become paralyzed, options and choices appear nonexistent, and hopelessness permeates their problem solving ability. Researchers have found that patients who are suicidal are much less able to generate solutions in response to difficulties. Their thinking becomes constricted and rigid. Often the past, present, and future blend as the pain of the present becomes intolerable and hope for the future diminishes (Jamison, 1999).

Patients who are suicidal tend to focus on negative experiences and failure events, while undervaluing past successes. Neuropsychologists have found that a suicidal ideation may activate a network of negative memories that are connected in the brain. The more an individual rumi-

nates over negative memories and thoughts, the stronger the memories become so that they begin to color the person's entire cognitive and emotional perspective. The brain becomes primed for retrieving negative memories and interpreting past, present, and future events through a negative lens (Keilp et al., 2001). When this type of thought pattern is mixed with lack of sleep and/or substance abuse, the risk of suicide significantly increases (Jamison, 1999).

PRECIPITANTS OF SUICIDE

Stressful life events precipitate suicide—they do not cause it. Researchers have documented that stress has a significant effect on the body's immune function, the production of stress hormones, and the sleep-wake cycle—all of which are intricately woven in the generation of manic and depressive episodes. Wehr, Sack, and Rosenthal (1987) demonstrated that psychological stress, certain medications and illnesses, and significant alterations in light and temperature can disrupt circadian rhythm patterns. Such circadian rhythm disruptions can, in turn, trigger mania or depression in vulnerable individuals.

There is a growing body of evidence suggesting that stressful life events precede the onset of manic and depressive episodes. People with mood disorders appear to be affected more by stressful life events than are people with schizophrenia. Researchers have found that negative stressors not only increase the rate of relapse in patients with mood disorders, they also increase the length of time required for recovery. In the absence of significant life stressors, patients require approximately four to six months to recover from a manic or depressive episode. If negative events preceded the relapse, however, patients require approximately 11 to 12 months to recover—a nearly three-fold increase in recovery time. This increased recovery time extends the period of vulnerability for suicide attempts (Malkoff-Schwartz et al., 1998).

Sudden heartbreak and emotional upheaval, economic and employment failure, legal difficulties, and the occurrence of severe humiliating circumstances tend to precede some suicides. Relationship difficulties and criminal prosecution more often occur before the suicides of people with substance abuse problems and personality disorders, than those with mood disorders (Malkoff-Schwartz et al., 1998).

Precipitating factors differ with regard to gender and age. Adolescent males are much more likely than females to have experienced a crisis in the 24 hours prior to their suicide. The most common precipitating factors

include relationship breakups, disciplinary actions or legal threats, and events of public failure or rejection. It has also been found that many male adolescents who complete suicide are depressed and have an aggressive, impulsive, and volatile personality. Such adolescents also tend to have substance abuse problems and conflicted relationships (Evans et al., 2001). Another common profile of adolescent suicide is that of a high-achieving, anxious, and depressed individual with perfectionistic tendencies. For such an adolescent, social or academic failures—whether real or imagined—can sometimes precipitate a suicide (Keith, 2001).

Mann, Waternaux, Haas, and Malone (1999) developed a stress-diathesis model in an attempt to explain the relationship between a biological predisposition for suicide and the precipitants that may trigger it. The factors that influence the predisposition for suicide act together to establish a threshold for suicidal behavior. Such factors include (a) genetic vulnerabilities; (b) a family history of suicide attempt and/or completion; (c) serotonergic dysfunction in the brain; (d) psychiatric illness; (e) having an aggressive and impulsive temperament; (f) substance abuse; (g) chronic medical illness; and (h) certain social factors such as the early death of a parent, social isolation, or a childhood history of physical and/or sexual abuse. The threshold for suicidal behavior can be raised by religious beliefs, the presence of children in the home, financial security, a strong social support network, and a satisfying marriage or partnership. In the presence of a strong predisposition to suicide, these protective factors may be of limited value.

Attempting to weigh biological predisposition and precipitating factors in order to predict the risk of suicide is one of the most difficult clinical dilemmas. Research has consistently demonstrated that a suicide attempt is the single best predictor of suicide completion. Of those who carry out suicide attempts, 15 to 20% eventually go on to complete suicide (Kessler et al., 1999).

HIGH RISK PERIODS FOR SUICIDE

The first days of hospitalization and the days just prior to discharge are high-risk periods for suicide. In the period prior to leaving the hospital patients are often faced with fears concerning rejection by family and friends, intense loneliness, economic and work instability, and anxiety about one's ability to manage outside of the structured hospital setting. Such fears are often confounded by an uneven clinical course, as patients swing between periods of apparent recovery and seeming relapse.

Mixed states are common during this time, leaving patients with volatile mood cycling, disrupted sleep patterns, anxiety, agitation, and extreme restlessness. The uneven course of recovery—when people may feel well and then ill again—is often sharply discouraging. In this stage patients can frequently find themselves in the clinical predicament of being too well to remain in the hospital, but not well enough to effectively manage life stresses (Maris, 2002).

One of the highest risk periods for suicide occurs when people are beginning to recover from depression. Sometimes the return of energy that can accompany the early stages of recovery can enable individuals to act on suicidal thoughts—where previously, depression had paralyzed their ability to carry out suicidal behavior (Maris, 2002).

When working with this population, therapists should also be aware of the phenomenon in which patients—just prior to suicidal behavior—appear calm and even free of suicidal symptoms. Researchers have reported that approximately one-third of hospitalized patients were observed by staff as improved in the minutes and hours prior to suicide (Sharma, Persad, & Kueneman, 1998). Such calmness may reflect a genuine shift in mood that can commonly occur just prior to the onset of a mixed mood state. Individuals may also experience a relief of anxiety after having decided to end their suffering. Medical staff have also commonly documented that patients may sometimes deliberately deceive health care professionals and family in order to secure the circumstances necessary to attempt suicide (Jamison, 1999).

PREVENTION AND TREATMENT

The roots of suicidal behavior lie in one's genetic and biological vulnerability, the presence of psychiatric conditions and acute stress, and one's temperament. Treating only one of these factors is likely to be ineffective in reducing a person's suicide risk. In the clinical setting the assessment of suicide risk must precede any treatment of psychiatric conditions. Patients should be asked about suicidal thoughts or plans as a standard part of history taking. Other risk factors must also be evaluated: (a) the pervasiveness and severity of psychopathology; (b) the presence of severe anxiety, agitation, or irritability; (c) the presence of mixed states; (d) the presence and type of sleep disturbance; (e) current alcohol or drug use; (f) the occurrence of recent severe stress, such as divorce, employment loss, or death in the family; (g) a history of a previous suicide attempt; (h) a family history of suicidal or violent behavior;

(i) close proximity to a first episode of depression, mania, or schizophrenia; (j) access to good medical and psychological treatment; (k) compliance with medication routine; (l) recent release from a psychiatric hospital; (m) the extent of the person's hopelessness; (n) social isolation; and (o) access to a lethal means, such as guns (Mann et al., 1999).

It is also necessary to obtain a history of a patient's violent and impulsive behaviors—as these can facilitate suicide when combined with psychiatric states. While many patients are reluctant to acknowledge such behavior, patients should be asked whether or not they have a violent or quick temper; how commonly they find themselves in the midst of turbulent, combative relationships; and whether they experience frequent and pronounced irritability and impulsivity (Lott, 2000).

Pharmaceutical Treatment

A large body of research has demonstrated that lithium is the most effective medication in the stabilization of mood and the prevention of suicide. Lithium has been used since 1949 to stabilize the volatile mood swings and erratic behaviors associated with bipolar disorder. It has also been used as an effective drug to reduce the recurrence of depressive episodes. Researchers have shown that patients with major depression or bipolar disorder who were not treated with lithium were nearly nine times more likely to attempt or complete suicide than those treated with it. In one study, suicidal behaviors increased 16% in the first year after lithium discontinuation (Baldessarini, Tondo, & Hennen, 1999; Nilsson, 1999).

Some patients, however, do not respond well to lithium, and many are unable to tolerate the side effects. Lithium also requires blood toxicity levels to be consistently monitored—making the drug less appealing to many physicians and patients. In contrast, many of the newer medications used to treat mood disorders—the anticonvulsants, the selective serotonin reuptake inhibitors (SSRIs), and the serotonin and norepinephrine reuptake inhibitors (SNRIs)—are more easily administered and monitored than lithium (Goldstein & Goodnick, 1998; Mischoulon, Nierenberg, Kizilbash, Rosenbaum, & Fava, 2000). There is some research evidence that the anticonvulsants and antidepressants are most effective when used together (Goodwin, 1999).

The anticonvulsant valproate (Depakote) has recently overtaken lithium as the most widely prescribed medication for bipolar disorder (Keck & McElroy, 2002). The effectiveness of the anticonvulsants

(valproate, carbamazepine, gabapentin, lamotrigine, and topiramate) to reduce suicide risk, however, has not been demonstrated. Several studies have shown that suicide rates decrease when lithium is administered; the same has not been found when anticonvulsants or antidepressants have been administered (Goodwin, 1999). Some physicians recommend a combination of lithium and another mood stabilizer (an anticonvulsant or antidepressant) as the best course of treatment to reduce suicide risk (Jamison, 1999).

Because there is a high rate of suicide in patients with bipolar II disorder, physicians should be trained to make an accurate differential diagnosis. Bipolar II disorder is characterized by extended episodes of depression with shorter and milder periods of mania (APA, 1994). Commonly, patients with bipolar II disorder are misdiagnosed as having depression alone—in part because patients infrequently experience the mild manias as pathological, and in part because physicians may fail to accurately diagnose bipolar II disorder. Physicians and therapists should be aware that mood volatility, irritability, and sleep disturbance can be signs of bipolar disorder. It is estimated that approximately one-third of patients are inaccurately diagnosed with depression rather than bipolar disorder. Such misdiagnosis can result in a treatment choice that actually exacerbates the illness over time. If antidepressants are prescribed alone for bipolar II disorder—rather than in combination with lithium or an anticonvulsant—the antidepressant can facilitate manic episodes and potentially suicidal mixed states (Baxter & Appleby, 1999).

For patients with severe recurrent major depression, it has been found that the SSRIs, SNRIs, and the tricyclic antidepressants have relatively equal effectiveness—although the SSRIs and SNRIs are often more tolerable than the tricyclics. While these classes of drugs tend to be highly effective with mild to moderate depressions, they are not as effective with severe, recurrent depression (Goldstein & Goodnick, 1998; Mischoulon et al., 2000). The most rapidly effective treatment for severe, recurrent major depression is electroconvulsive therapy (ECT). The short-term memory deficits that result from ECT, and the need for maintenance therapy approximately every six months, make this treatment option unappealing for many patients and physicians (Rabheru & Persad, 1997).

For patients with schizophrenia, the newer antipsychotic medications—when monitored carefully and administered in moderate doses—have been found to alleviate some of the symptoms of schizophrenia. There is evidence that such medications (Clozaril, Risperdal,

and Zyprexa) may also reduce the rate of suicide in patients with schizophrenia (Pompili et al., 2002).

Therapy

Despite the advances in medications to treat psychiatric conditions, research has consistently found that the most effective treatment is some combination of medication and therapy (Thase, Greenhouse, & Frank, 1997). Occupational therapists who work with this population must be able to tolerate patient feelings of depression, hopelessness, anxiety, rage, loneliness, and meaninglessness. They must be able to listen empathically and convey that they view patient concerns with great seriousness.

One of the ways that occupational therapists can help this population is to teach patients to recognize the early symptoms of their illness in order to seek clinical help before an episode escalates into a severe pathological event. Therapists can help patients develop plans that specify emergency steps to follow in case of relapse. Such plans should include expeditious and simple methods to contact medical help and family members as soon as patients first observe symptoms. Teaching patients to recognize and act on first symptoms is critical, as this is a population that commonly ignores symptoms until episodes escalate beyond control. Learning to recognize and seek help in response to initial symptoms can help prevent the escalation of illness that can lead to hospitalization, unemployment, relationship loss, and/or suicide.

Therapists should also help patients understand the importance of medication compliance. Too often patients independently stop their medication upon feeling well, particularly if side effects are unpleasant and difficult to tolerate. Therapists can help patients understand that continuing to take one's medication—even after one is feeling well—can prevent relapse. Patients should be educated about the consequences of independently stopping (and starting) their medication without medical supervision. Inconsistently stopping and starting medication can cause powerful changes in brain chemistry that can precipitate an episode and worsen the course of an illness over time. Therapists can help patients weigh the lifetime cost of medication noncompliance against the cost of medication side effects. A patient's willingness to comply with a prescribed medication routine is probably the single most important factor—over which one has control—that determines the course of one's illness.

It is also critical to help patients understand how alcohol and drug use can severely exacerbate one's illness. It is common for patients to attempt to alleviate the pain of their illness with alcohol and/or drugs. Often patients with psychiatric conditions who abuse alcohol and drugs do not receive adequate treatment for substance abuse (Preuss et al., 2002). Addressing substance abuse problems within the clinical setting is crucial in the prevention of impulsive suicides that commonly occur in disinhibited states induced by alcohol and drug consumption.

Patients can also benefit when they are educated about the variable course of recovery. Many patients and family members mistakenly believe that recovery from a psychiatric episode is a linear, progressive path. Learning that setbacks occur naturally as part of the recovery process—and that setbacks are temporary and can be overcome with medical assistance—are important for patients to understand to prevent feelings of failure and despondency when relapse occurs. One never expects the occurrence of a relapse; however, if patients can learn to accept relapses as natural and temporary occurrences in the larger schema of their illness, they can learn to better manage setbacks instead of being thrown into crisis. Learning how to manage setbacks is a critical skill that therapists can help patients gain. Skills necessary for successfully handling setbacks include (a) immediately seeking medical care; (b) contacting family members for assistance (if available); (c) having contracts in place with family/friends to provide assistance if they observe symptomatic signs in the patient (e.g., removing access to credit cards in the initial stages of a manic episode and contacting the patient's physician or psychiatrist); and (d) having agreements in place with family/friends who will help patients remember that the present setback is temporary; that they have survived past setbacks and have gone forward to experience periods of wellness; that wellness is again possible with medical treatment and the ability to tolerate the passage of time; and that suicide is a permanent solution to a temporary problem.

Often it is beneficial to help patients develop contingency plans with family, friends, and members of the medical team. A contingency plan specifies what actions should be taken and by whom when patients experience relapse. Contingency plans are developed when patients are not in crisis but rather are in periods of wellness when rational thought and decision-making are possible. Patients who know that they are unlikely to consent to contingency plans when they are ill may—in some parts of the United States—draw up advanced directives or legal instructions that enable them to designate treatment in advance (Jamison, 1999).

Therapists can also help patients who are in the midst of a depressive episode to identify realistic choices despite feelings of hopelessness. The ability to find solutions to life problems becomes dangerously diminished as a result of the cognitive deterioration characteristic of severe depression. Such degeneration in problem solving skills precedes the type of suicidal ideation in which patients believe that alternatives to suffering do not exist. Helping patients identify a range of acceptable options is a therapeutic component necessary for patients to regain hope that their lives can become tolerable and even satisfying.

Therapists should also educate patients and family members about the need for on-going treatment. It has been found that when follow-up care is provided to patients at risk for suicide, they are more likely to remain in treatment (Newell, 2001). The significance of follow-up care has become heightened as managed care practices—including capped psychiatric visits and shortened hospital stays—have reduced patient access to adequate psychiatric treatment. Maintaining regular visits with one's psychiatrist to monitor medication and coping strategies is essential for staving off relapse and suicidal behavior.

Family member involvement in a patient's therapy is often a determining factor of a successful recovery process. Therapists can help family members better understand the patient's illness, its symptoms and course, reasonable expectations for recovery, and effective treatments. It is often helpful to increase family member awareness of available support groups and resources. Having an understanding of the psychiatric history in one's family is critical for all family members to recognize symptoms and seek treatment. When families are able to discuss their psychiatric history openly, members—particularly adolescents and young adults who may be at greatest risk for developing a psychiatric condition—are more likely to seek treatment (Merisalo, 2000). College-age family members are at a heightened risk for mental illness and suicide, as first episodes of illnesses commonly occur in this life period. Because college-age children are away from home (often for the first time), they are subject to the stresses of an academic environment, may use alcohol or drugs more heavily, and may alter their sleep patterns in disruptive ways to accommodate work and school, they are more vulnerable to a first psychiatric episode. When all family members are educated about their psychiatric history, the members can help each other—particularly younger members—to more vigilantly identify symptomatic behaviors and seek treatment before an illness can cause severe life disruptions, including suicidal behavior.

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RESOURCES

American Association of Suicidology
4201 Connecticut Avenue, Suite 408
Washington, DC 20008
(202) 237-2280
www.suicidology.org

American Foundation for Suicide Prevention
120 Wall Street, 22nd Floor
New York, NY 10005
(888) 333-2377
www.afsp.org

Anxiety Disorders Association of America
8730 Georgia Avenue, Suite 600
Silver Spring, MD 20910
(240) 485-1001
www.adaa.org

Depression and Bipolar Support Alliance
730 North Franklin Street, Suite 501
Chicago, IL 60610
(800) 826-3632
www.dbsalliance.org

National Alliance for Research on Schizophrenia and Depression
60 Cutter Mill Road, Suite 404
Great Neck, NY 11021
(516) 487-6930
www.mhsource.com/narsdad.html

National Alliance for the Mentally Ill
Colonial Place Three
2107 Wilson Boulevard, Suite 300
Arlington, VA 22201
(800) 950-6264
www.nami.org

Suicide Prevention Advocacy Network
5034 Odin's Way
Marietta, GA 30068
(888) 649-1366
www.spanusa.org

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