Suicide and Gender

by

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One of the most perplexing facts about suicide is that women attempt suicide at a substantially higher rate than do men, but more men succeed in ending their lives. Suicide is the eighth leading cause of death in the United States; in 1992, men in the U.S. completed suicide at a rate of 20.1 per 100,000 individuals, compared with the much lower female rate of 4.7 per 100,000 people. The difference in men's and women's suicide rates is even more striking among African Americans, with the suicide rate for males at 11.1 per 100,000 individuals and the rate for females at 2.0 per 100,000 individuals. These gender differences for all American men and women have remained stable since the turn of the century (Figure 1). For suicide attempts the opposite is the case: women attempt suicide three times as frequently as men. Since, however, a history of a previous suicide attempt is one of the strongest predictors of completed suicide, what can account for the paradox of more suicide attempts among women, but more completed suicides among men? Gender-specific differences in the risk factors for suicide may help explain these differences.

Risk Factor Domains for Suicide

Six important risk factor domains for suicidal behavior have been identified: 1) A history of mental or addictive disorder: including mood disorders, which have a higher incidence among women, and substance abuse, which is more frequent in men; 2) Personality traits: aggressivity, impulsiveness, hopelessness, cognitive rigidity and antisocial behaviors; 3) Psycho-social and environmental factors: physical or sexual abuse, decreased familial or social supports, parental loss, exposure to suicidal behavior, negative life events, chronic physical illness, pregnancy in adolescent females, or being a runaway; 4) A family history of suicidal behavior or mental illness; 5) Biological correlates including certain hormonal factors and a deficiency in the neurotransmitter serotonin; 6) High-risk epidemiologic and demographic factors: being male; being between the ages of 15 and 24 or over the age of 65; or being single, recently widowed, separated or divorced. It is the overlap of risk factors from several domains which increases the risk of suicide. In people who have a combination of these overlapping risk factors a humiliating life event is frequently the trigger to suicide; this precipitant is found in 90 percent of cases of suicide.

More women than men have dysthymia, seasonal affective disorder, and rapid-cycling bipolar disorder, for example, and women's higher rate of attempted suicide may be related to this elevated rate of mood disorder. However, it is the overlap of other factors that may account for men's higher rate of completed suicide, as men, more than women, experience the "lethal triad of suicide": the overlap of impulsive and aggressive personality traits, substance abuse, and depression.

Different Means Lead to Different Ends

Part of the explanation for the male/female discrepancy in rates of completed suicide may be due to men's utilizing more violent and more lethal suicide methods. The United States is the only country in the world where use of firearms constitutes the most common method of suicide, and this very lethal method is used predominantly by men. In 1990, for example, males used firearms at a rate of 13.4 to commit suicide, while the rate for females was 2.04 per 100,000 persons. Males over the age of 85 have the highest rate of suicide by use of firearms (46 per 100,000), and males aged 65 to 84 have the second highest rate for suicide by use of firearms (31 per 100,000). Since 1968, the suicide rate among U.S. youth aged 15 to 19 has more than doubled, with firearm suicides in this age group increasing by 31 percent among white males and doubling for black males between 1984 and 1988. Moreover, several studies show that those states which have strict gun control laws have lower ratesof suicide.

Gender Differences Over the Life Span

Age is also a significant factor in suicide. In the U.S., suicide rates are highest after the age of 65, but over the past 30 years the greatest increase in rates has occurred in young people 15 to 24 years old. Suicide has become the third leading cause of death for Americans in this age cohort, and the largest percentage increase in suicide since 1970 has occurred among males aged 15 to 24 years (237 percent increase) and 25 to 34 years (87 percent increase). The suicide rates for females in this age group (15 to 24 years) also increased by 65 percent between 1970 and 1988. During the same period there has been a decline in the suicide rates for Americans over the age of 45.

Adolescence and young adulthood mark the period of the life cycle when impulsive, risk taking behavior is most common, and when substance abuse and many mental illnesses first emerge. Our country's increase in youth suicide may be explained by the rising rates of mental illness, the earlier onset of mental disorders, the increased rates of substance use -- particularly among men, and the easing of access to handguns in urban and rural communities. Other social and economic factors -- such as men's and women's changing social roles, rising divorce rates, increased competition for jobs and resources, and increased geographic mobility weakening individuals' social supports -- these may also contribute to the increase.

Suicide is more common among those who are single, recently separated, divorced, or widowed. The suicide rates are highest for widowed men and second highest for divorced men. Divorced women have a suicide rate almost four times that of married women, but widowhood does not impact on suicidal behavior in women to the extent that it does in men.

Men, in particular, may experience old age as the "season of losses": the deaths of friends and loved ones, the loss of employment through retirement provoking a loss of self-esteem and work-related social contacts; and the loss of good health to chronic illness, leading to a loss of physical mobility, personal autonomy, and personal dignity. In fact, chronic medical illness is an important risk factor for suicide among most age groups and appears to be an

important contributory cause in nearly half of all suicides.

The losses occurring in old age may increase hopelessness and depression. Perhaps for reasons having to do with gender differences in social roles, use of social supports, and men's and women's different life expectations, these losses could affect men's mental health more adversely than women's. While men over the age of 65 have the highest suicide rates -- 40 per 100,000, women over the age of 65 have the dramatically lower suicide rate of .07 per 100,000.

Protective Factors

Suicide appears to occur when multiple overlapping factors are present in the absence of protective factors. Such protective factors include strong social support, hopefulness, obtaining treatment for mental illness, not experiencing losses and disappointments as humiliating, and having a safer environment with restricted access to highly lethal methods of suicide, such as guns.

Women are more likely than men to have stronger social supports, to feel that their relationships are deterrents to committing suicide, and to seek psychiatric and medical intervention -- these protective factors may contribute to their lower rate of completed suicide. For example, being married and having children is a protective factor against completed suicide for women -- but not for men. Similarly, women's suicide attempts can be efforts to modify the human environment to protect themselves from completing suicide through gaining support and intervention from family members and medical professionals.

Sex role stereotypes, gender role socialization and men's emphasis on cognitive capabilities rather than interpersonal relationships may also contribute to the differences in men's and women's suicide rates in the past. These factors could make men experience more humiliation in the face of work-related life events like job loss or work problems. Men's suicide rates were at their highest over the past century, for example, during the Great Depression, when many men were unemployed. By contrast, the precipitating life events for women who attempt suicide tend to be interpersonal losses or crises in significant social or family relationships. However, as social roles change for men and women, so may suicide statistics.

Gender differences in the course of mental disorders may affect individuals' risk of suicide. For example, manic-depressive illness has a strikingly high rate of suicide -- twenty percent -- with up to half of all bipolar patients attempting suicide at least once. While manic-depressives of both sexes have similar rates of suicide completion, there are major differences in when they attempt suicide, with more men attempting suicide early, at the onset of the illness.

Biological Factors and Suicidal Behavior in Women

Changes in brain chemistry and hormonal factors may contribute differently to suicidal behavior in men and women. Studies of pregnant adolescents find an increase in their suicidal behavior, and unwanted pregnancy has long been thought a precipitating factor in

suicide, but pregnancy is more often a protective factor against both suicide and mental illness. While the elevated levels of brain neurotransmitters and hormones that occur in pregnancy may protect women against depressions caused by deficiencies in these compounds, the falling levels of neurotransmitter and gonadal hormones after delivery may contribute to the high frequency of postpartum depression.

Studies confirm this drop in the incidence of severe mental illness during pregnancy, and its dramatic rise during the postpartum period to two or four times the expected rate. Many women who suffer from manic-depressive illness experience their first episode in the postpartum period. In fact, during the postpartum period 60 to 80 percent of women experience transient depression, 10 to 15 percent of women develop clinical depression, and one out of every 1,000 women develops psychosis.

It should also be noted that the postpartum period carries with it sleep deprivation, increased stress,strains and disruptions in interpersonal relationships, and other changes that accompany caring for a new baby. The influence of pregnancy and childbirth on women's mental health and the impact of these events on women's suicidal behavior is an area that warrants further study.

Hormone cycles may also play a role in protecting women against suicide. Parry suggests that, "The cyclicity of estrogen, progesterone, and other female reproductive hormones may destabilize or sensitize neurochemical and biologic clock mechanisms, setting the stage for development of cyclic mood disorders." While the cyclicity of women's endocrine milieu may increase their vulnerability to episodic depressions, it may also protect women against the development of many chronic illnesses, such as heart disease and, possibly, certain mental disorders.

These hormones have significant effects on mood and behavior. Estrogen, for example, has been used as a treatment for refractory depression, but the mechanism of its antidepressant effect is unknown. Women's higher levels of estrogen may have particular effects on the regulation of the neurotransmitter, serotonin -- and low levels of serotonin have been implicated in the aggressivity and impulsivity associated with violent suicidal behavior. Further research is needed on gender differences in the interaction of neurobiological, hormonal, and psychological factors in suicide.

Conclusion

The increased attention to women's health issues over the last four years has exposed the previous neglect of gender differences in the cause, progression, and treatment of physical and mental disorders. This has certainly been true for suicide, where few studies have compared the suicidal behavior of men and women. Since more than 90 percent of individuals who commit suicide suffer from some type of mental illness, this new attention to the study of gender differences in mental disorders holds great promise for increasing our understanding of suicide attempts and completions.

The recent changes in men's and women's traditional social roles coincides with shifts in the incidences of the mental disorders that affect them. Depressive illness is on the increase

among men aged 25 to 34 years, narrowing women's historically higher frequency of depression. How these changes will impact on women's and men's rates of suicide requires further exploration.

Until research teaches us more about specific gender differences in risk factors for suicide, the same principles apply for preventing suicide among both men and women: 1) accurately diagnose and treat mental and addictive disorders; 2) provide social supports; 3) increase awareness of the signs of suicidal behavior and symptoms of mental illness and substance abuse on the part of teachers, employers, and health care professionals; and 4) modify the environment to reduce access to handguns, decrease the romanticization of suicidal behaviors by the media, and provide adequate insurance coverage for treatment of mental and addictive disorders. We should also be sensitive to the biological, social, and psychological factors that affect suicidal behavior differently in men and women. Health care professionals must consider these gender differences in treating patients who are at risk for suicide.

In his Philosophical Dictionary, Voltaire observed that "The man –(let's also make that woman)--who, in a fit of melancholy, kills himself today, would have wished to live had he waited a week." Concerned citizens and health care professionals alike have a critical role to play in recognizing the warning signs for suicide among family members, coworkers, friends, and patients. By providing support and interventions to those women and men who are at risk for suicide, we may be able to stem the rising tide of suicide in the United States.

Further reading:

Blumenthal, SJ and Kupfer, DJ, eds.: Suicide Across the Life Cycle. Washington, DC: American Psychiatric Press, Washington DC, 1990.

Tsuang, MT, Simpson, JC, and Fleming, JA: Epidemiology of Suicide. International Review of Psychiatry, Vol. 4 (1992):117-29.

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