Dan Bilsker, PhD, Jennifer White, EdD

The silent epidemic of male suicide

A lack of public awareness and too few explanatory frameworks and preventive efforts specifically targeting male suicide have made a major public health problem largely invisible.

ABSTRACT: Suicide in men has been described as a "silent epidemic": *epidemic* because of its high incidence and substantial contribution to men's mortality, and *silent* because of a lack of public awareness, a paucity of explanatory research, and the reluctance of men to seek help for suicide-related concerns. A statistical overview demonstrates a shockingly high rate of death by suicide for men compared with women, and a need to focus attention on prevention, screening, treatment, and service delivery. Promising lines of research include identification of clinical indicators specifically predictive of male suicide and exploration of precipitating and predisposing factors that distinguish male suicide and account for the substantial gender disparity. Only by breaking the silence—building public awareness, refining explanatory frameworks, implementing preventive strategies, and undertaking research—will we overcome this epidemic.

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Suicide in men has been described as a "silent epidemic."[1] It has a disturbingly high incidence and is a major contributor to men's mortality. In British Columbia, suicide is one of the top three causes of mortality among men aged 15 and 44.[2] Among men of all ages in Canada, suicide ranked as the seventh leading cause of death in 2007.[3] The silence surrounding suicide among men is also striking and warrants comment. First, there appears to be an overall lack of public awareness regarding the high rates of suicide among men, especially relative to other more highly publicized threats to men's health, such as HIV/AIDS, that account for far fewer premature deaths among males each year (e.g., in 2005 45 male deaths were attributed to AIDS in Canada in contrast to 2857 male deaths from suicide).[4,5] Second, while accumulating empirical evidence confirms that men in Western nations consistently die by suicide at higher rates than women[6,7] (with the pattern reversed for nonfatal suicidal behaviors), surprisingly few explanatory frameworks have been developed to account for this persistent pattern. Third, few preventive efforts or policies specifically targeting male suicide have been developed or evaluated, which further contributes to its lack of visibility as a major public health problem. When gender is addressed it is often treated as a static demographic variable as opposed to a culturally mediated social construction that intersects with other diversity markers such as race, sexual orientation, and age in highly complex ways.[8,9] Finally, given men's general reluctance to seek help for suicide-related concerns,[7] and the stigma associated with mental health problems in general, it is no surprise that suicide among men is largely invisible.

A statistical overview of the magnitude of the problem within a Canadian context reveals that suicide claims the lives of nearly 3000 men

Dr Bilsker is a health services researcher with the Centre for Applied Research in Mental Health and Addiction at Simon Fraser University, and a clinical assistant professor in the Faculty of Medicine at the University of British Columbia. He consults to the Mental Health Commission of Canada, with a focus on enhancing service delivery and knowledge exchange in the Canadian mental health care system. Dr White is an assistant professor in the School of Child and Youth Care at the University of Victoria. She has been studying and practising in the field of suicide prevention for over 20 years.

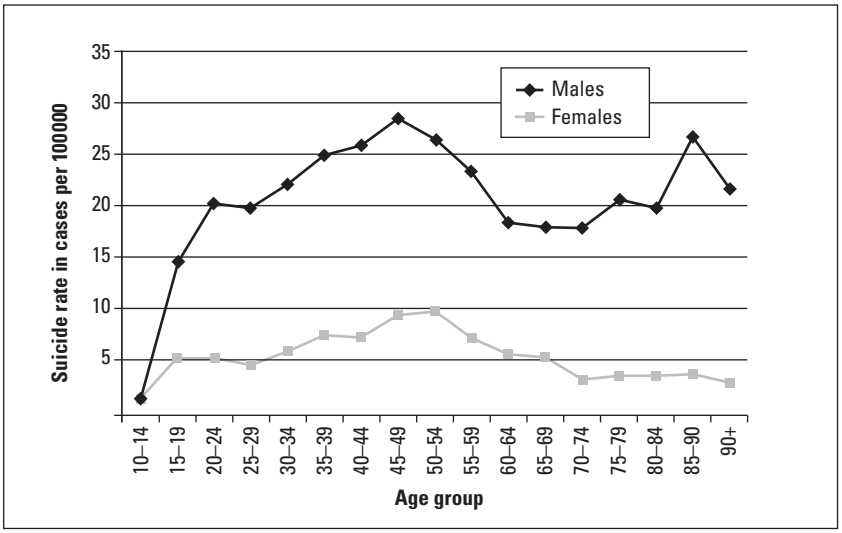

Figure 1. Median male and female age-specific suicide rates for Canada, 2001–2005.

Source: Statistics Canada

each year. Findings from a range of intellectual traditions and disciplines, including contributions from quantitative and qualitative research paradigms, reveal much about the consequences of male suicide to society. These consequences lead in turn to discussion of prevention, screening, treatment, and service delivery issues, as well as recommendations for future research.

Magnitude of the problem

Men have a shockingly high rate of death by suicide compared with women. Across all countries reporting these data (except China and India) males show a suicide rate that is 3.0 to 7.5 times that of women.[10] In Canada, the male suicide rate is about three times that of women.[11] **Figure 1** charts the age- and gender-specific incidence of suicide in Canada, based on data from 2001 to 2005. Two patterns are worth noting:

- The male suicide rate increases fairly steadily with age, peaking in the late 40s, then falling significantly and rising again in the 80s.
- Male rates are greater than female rates at all ages and substantially greater across most of the lifespan.

The male pattern showing a peak in suicide rate among Canadian men in their 40s and 50s is surprising in light of multinational data showing one of two patterns: a steady increase in suicide rate with age *or* a peak of suicide in younger age groups.[12,13] However, a change in this suicide pattern may be underway, at least in North America:

> Among US white men, middle age has historically been a time of relatively lower risk of completed suicide, compared with elderly men. Yet by 2005, the suicide rate of white men aged 45 to 49 years was not only higher than the rate for men aged less than 40 years but also slightly higher than the rate for men aged 70 to 74 years… suicide-prevention efforts have focused most heavily on the groups considered to be most at risk: teens and young adults of both genders as well as elderly white men… Suicide in the middle-adult years has not been studied as extensively.[14]

It is apparent that our knowledge of men's suicide is lagging behind changes in the age-specific incidence of this cause of death. Until we understand the underlying reasons for this relative increase in men's suicide rates in middle age, including potential cohort effects, we will not be able to implement effective preventive action.

While the analysis of suicide rates is highly informative, some epidemiologists have argued that a more useful way to evaluate suicide impact is in terms of potential years of life lost (PYLL), which reflects both mortality rate and age at which death occurs: "This measure takes into account an argument that the death of a young person involves more loss than that of an older person. This alternative measure incorporates the notion that one death is not implicitly the same as another death. This notion is particularly important when one seeks to weigh the importance of suicide relative to other causes of death."[15]

Suicide is the second leading cause of potential years of life lost by men compared with women, reflecting both men's higher rate of suicide and the relatively young age at which many suicide deaths occur. In Canada, suicide accounts for about 10% of all PYLL for men; in BC, it accounts for about 7%.[11]

We also need to look at suicide attempts to understand the gender difference in suicidal behavior. Although men die by suicide at a higher rate, women have a higher rate of attempting suicide.[16] This pattern is evident among youth and persists over the lifespan.[9] The ratio between suicide attempts, based on hospitalization data, and actual suicides for men and women in Canada, is shown in **Figure 2**.[17] It should be noted that there is a spectrum of self-harm, ranging from acts of physical self-harm not intended to be suicidal, to acts that

reflect ambivalence about dying, to acts that reflect a clear and settled intention to die. The broad term *deliberate self-harm* (DSH) is often used in the research literature to capture this range of possible actions. As one might expect from the suicide attempt statistics, women show much higher rates of DSH.[16]

Prevention

We do not fully understand the complexity of suicide, including the reasons for the gender difference in suicidal behavior. This makes it particularly challenging to develop effective prevention programs that can address the high rates of suicide in men specifically. What are the factors contributing to men's higher rate of death by suicide; and, in particular, why do such a high proportion of male suicide attempts end in death? As noted in a recent review of suicide risk screening, "dramatic differences in suicide behaviors among men and women… have drawn little attention. A better understanding of these variations may have direct implications for screening and treatment strategies, and they warrant further research."[18]

One line of investigation has focused on suicide methods.[6] A well-established finding is that men are more likely to use suicide methods of high lethality, methods with increased risk of death. For example, a recent pan-European study found that the highly lethal methods of hanging and firearms were more likely to be used by men. Sixty-two percent of males, versus 40% of females, used hanging or firearms in their suicidal actions.[19] Other investigators have confirmed that compared with suicidal women who use firearms to shoot themselves in the body, men are more apt to shoot themselves in the head, increasing the likelihood of death.[20] These findings suggest that restricting access to firearms might be a way to achieve a relative reduction in male suicide, and there is some tentative support for this as an important suicide prevention strategy.[21-23] In contrast, it is next to impossible to reduce access to ligatures and suspension points commonly used in hanging deaths since these materials are widely available in the community.[24]

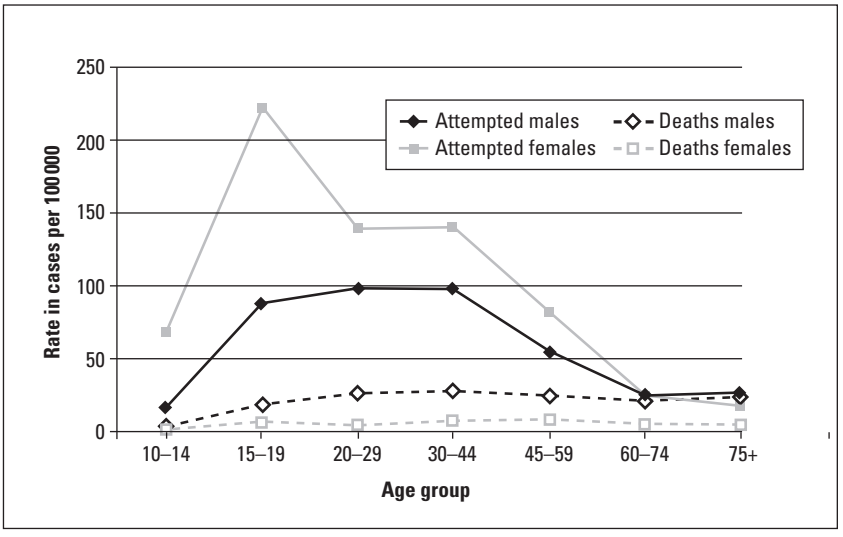

Figure 2. Suicide death and suicide attempt (hospitalization) rates for Canada, 1998.

Source: Langlois S, Morrison P, 2002.[17]

From another point of view, we could ask why men are more likely to choose methods of high lethality. With regard to the use of firearms, it may be that men have more familiarity with and exposure to guns and thus are more likely to use this method. But when it comes to hanging, the picture is far more complex. For example, proportionally, women choose hanging as a method of suicide almost as frequently as men.[6] Here in British Columbia for example, hanging was the most common method of suicide for men and women in 2009, accounting for 48% and 38% of suicide deaths respectively.[2] This observation undermines a simplistic, dichotomous understanding of the role of methods (i.e., more lethal versus less lethal) when attempting to account for the persistent gender gap in suicide.

Researchers have speculated about other reasons men may have for employing highly lethal means.[19,25] These explanations suggest that when compared with suicidal women, men who reach the point of suicidal action are:

- More hopeless.
- More clearly resolved to die.
- More likely to be intoxicated and thus more disinhibited.
- More willing to carry out actions that might leave them injured or disfigured.
- More unconcerned with consequences because of a high risk-taking orientation.
- More likely to have a greater capacity to enact lethal self-injury.

Despite some limited theoretical and empirical support, we currently lack strong evidence to support these explanations.

A study of suicide attempts in older men and women showed that men were more intent upon dying and moved more quickly and decisively from considering suicide to acting upon the suicidal ideation. The study noted,

"Our findings suggest that factors responsible for the increased suicide rate in older men operate largely during the suicidal crisis itself: once a depressed older man develops serious suicidal intent, he tends to realize it with little hesitation."[26] The reasons men move in this unhesitating way to suicidal behavior remain to be determined.

Men's lack of social support, relative to that available to women, has been implicated as a risk factor in male suicide.[27] An interview-based study of men who had attempted suicide suggested that social stressors—family breakdown, overwork, employment insecurity—often combined with alcohol or drug abuse, are understudied contributors to male suicide.[28] Some evidence suggests that occupational stress contributes more strongly to male than female suicide.[29]

Consistent with men's relatively low levels of help-seeking for psychological difficulties, a review of help-seeking by individuals who eventually died by suicide showed that men had lower overall rates of contact with the formal health care system (including primary care and mental health services) compared with women. Specifically, in the year before suicide, an average 58% of women versus 35% of men sought care from a mental health practitioner.[30] In contrast, an average 78% of men who died by suicide had contact with their primary care provider within the year prior to their suicide, lending support to the role played by primary care providers in suicide prevention.[30]

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Other promising approaches include community-wide interventions aimed at changing social norms. For example, in response to low help-seeking and rising suicide rates among men in the early 1990s, the US Air Force developed an innovative population-level suicide prevention strategy that was designed to change norms around help-seeking, improve community-wide awareness of suicide risks, and increase the use of local resources. This systematic effort, which targeted the whole community, was associated with a sustained decline in suicide rates, providing some preliminary support for this multilevel, early intervention approach.[31]

Screening and risk formulation

There are no special protocols or instruments recommended for screening men for suicidality in primary care. The typical recommended approach focuses on screening for depression (which is a common precursor of suicide) using brief questionnaires, which are typically the same for men and women.[32] One might expect that men's well-established reluctance to discuss relationship or emotional difficulties would call for more careful screening of men by health care providers, but there is not yet significant evidence supporting the effectiveness of a differential approach to men's depression or suicide risk.

Likewise, the evaluation of suicidality in men typically follows the same general protocol as that for women.[33] At the same time, certain risk factors are more predictive of male suicide, suggesting we should pay greater attention to these factors when evaluating suicidality in men. One study tracked individuals with the diagnosis of major depression over 2 years and found certain variables to be much more predictive of suicidal acts in men than in women: a family history of suicidal behavior, previous drug use, and early parental separation.[34] Male suicides are more likely to occur in the context of substance use disorders than are female suicides.[35] Men also show much higher levels of alcohol abuse—given the pervasive effects associated with abuse of alcohol and other drugs, it is not surprising to find an associated increase in suicide. This should be a key component in the assessment of male suicidality. Protective factors are important to consider in any comprehensive suicide risk assessment, and evidence suggests that protective factors may differ for men and women. For example, being married appears to be a

greater protective factor for men than for women.[16]

Research possibilities

To date, there has not been research to determine whether intervention for suicidality is comparably effective for men and women and whether suicidal men should be approached with different treatment modalities. A recent review of gender differences in suicide recommended that "Research on treatments for suicidal behavior should investigate gender differences in response. Initiatives to develop gender-specific approaches may be indicated. Gender differences in suicidal behavior clearly merit more research attention to generate information that can guide clinical practice and prevention strategies in ways that will prove most effective for preventing suicidal behavior in both genders."[16] It is remarkable how little we have learned about causal factors and preventive strategies specifically relevant to male suicide. One would think that the hugely elevated rate of suicide in men compared with women would have sparked a substantial investment of resources into systematic research and enhanced clinical practice. Instead, the high rate of male suicide has been treated as somehow natural and inevitable. The time has come to give this problem high priority.

One line of research might focus upon clinical indicators that are specifically predictive for male suicide.[36] Recognition of suicide indicators in clinical practice is especially problematic, given the disinclination of male patients to talk about emotional distress and their greater propensity for impulsive behavior. The development and validation of protocols for male-appropriate suicide assessment and intervention would greatly support health care providers in responding effectively to men's suicide risk.[37]

Another line of research would examine the precipitating and predisposing factors that distinguish male suicide and account for the substantial gender disparity in suicide mortality.[38] Why do men use more lethal methods, why do they move with less hesitation from thinking about suicide to implementing it, and why are they more reluctant to seek help in dealing with the stressors that contribute to suicide? A richer understanding of the pathways to suicide characteristic of men will give us a stronger basis for designing programs to prevent suicide in the general male population and the subpopulation of men with identified mental health problems.

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Summary

The epidemic of male suicide has been silent, but it cannot remain so. Only by breaking the silence—building public awareness, refining explanatory frameworks, implementing preventive strategies, and undertaking research—will we overcome this epidemic.

Competing interests

None declared.

References

1. Louis Appleby, National Director for Mental Health in England. Quoted by Dan Bell. The silent epidemic of male suicide. BBC News. 4 February 2008. Accessed 11 August 2011. http://news.bbc.co.uk/2/hi/uk_news/7219232.stm.
2. British Columbia Vital Statistics Agency. Selected vital statistics and health status indicators: Annual Report 2002. Accessed 9 October 2011. www.vs.gov.bc.ca/stats/annual/2002/.
3. Statistics Canada. CANSIM table 102-0561. Catalogue no. 84-215-X. Accessed 11 November 2010 from www40.statcan.gc.ca/l01/cst01/hlth36b-eng.htm.
4. Public Health Agency of Canada. HIV and AIDS deaths in Canada: Surveillance report to December 31, 2005. Ottawa, ON: Centre for Infectious Disease Control and Public Health Agency of Canada; 2006.
5. Statistics Canada. Suicides and suicide rate, by sex and by age group. Accessed 11 November 2010. www40.statcan.ca/l01/cst01/hlth66b-eng.htm.
6. Kpsowa A, McElvain J. Gender, place, and method of suicide. Soc Psychiatry Psychiatr Epidemiol 2006;41:435-443.
7. Moller-Leimkuhler A. The gender gap in suicide and premature death or: Why are

men so vulnerable? Eur Arch Psychiatry Clin Neurosci 2003;253:1-8.
8. Payne S, Swami V, Stanistreet D. The social construction of gender and its influence on suicide: A review. J Mens Health 2008;5:23-35.
9. Langhinrichsen-Rohling J, Friend J, Powell A. Adolescent suicide, gender, and culture: A rate and risk factor analysis. Aggression and Violent Behavior 2009; 14:402-414.
10. Nock MK, Borges G, Bromet EJ, et al. Suicide and suicidal behavior. Epidemiol Rev 2008;30:133-154.
11. Jones W. Background epidemiological review of selected conditions. Burnaby, BC: Centre for Applied Research in Mental Health and Addiction; 2009: 55.
12. Shah A. The relationship between suicide rates and age: An analysis of multinational data from the World Health Organization. Int Psychogeriatr 2007;19: 1141-1152.
13. Bertolote JM, Fleischmann A. A global perspective in the epidemiology of suicide. Suicidologi 2002;7:6-8.
14. Hu G, Wilcox HC, Wissow L, et al. Midlife suicide: An increasing problem in US whites, 1999-2005. Am J Prev Med 2008;35:589-593.
15. Doessel DP, Williams RF, Whiteford H. A reassessment of suicide measurement. Crisis 2009;30:6-12.
16. Hawton K. Sex and suicide. Gender differences in suicidal behaviour. Br J Psychiatry 2000;177:484-485.
17. Langlois S, Morrison P. Suicide deaths and suicide attempts. Health Rep 2002;13:9-22.
18. Gaynes BN, West SL, Ford CA, et al. Screening for suicide risk in adults: A summary of the evidence for the US Preventive Services Task Force. Ann Intern Med 2004;140:822-835.
19. Varnik A, Kolves K, van der Feltz-Cornelis, et al. Suicide methods in Europe: A gender-specific analysis of countries participating in the "European Alliance Against Depression." J Epidemiol Community Health 2008;62:545-551.
20. Stack S, Wasserman I. Gender and suicide risk: The role of wound site. Suicide Life Threat Behav 39:13-20.
21. Carrington PJ. Gender, gun control, suicide and homicide in Canada. Arch Suicide Res 1999;5:71-75.
22. Beautrais AL, Fergusson DM, Horwood LJ. Firearms legislation and reductions in firearm-related suicide deaths in New Zealand. Aust N Z J Psychiatry 2006; 40:253-259.
23. Mann J, Apter A, Bertolote J, et al. Suicide prevention studies: A systematic review. JAMA 2005;294:2064-2073.
24. Gunnell D, Bennewith O, Hawton, K, et al. The epidemiology and prevention of suicide by hanging: A systematic review. Int J Epidemiol 2005;34:433-442.
25. Joiner T. Why people die by suicide. Cambridge, MA: Harvard University Press; 2005.
26. Dombrovski AY, Szanto K, Duberstein P, et al. Sex differences in correlates of suicide attempt lethality in late life. Am J Geriatr Psychiatry 2008;16:905-913.
27. Houle J, Mishara BL, Chagnon F. An empirical test of a mediation model of the impact of the traditional male gender role on suicidal behavior in men. J Affect Disord 2008;107:37-43.
28. University of Western Sydney Media Unit. Social factors, not mental illness, to blame for high male suicide rate. 12 January 2008. Accessed 12 August 2011. http://pubapps.uws.edu.au/news/index.php?act=view&story_id=2350.
29. Qin P, Agerbo E, Westergard-Nielsen N, et al. Gender differences in risk factors for suicide in Denmark. Br J Psychiatry 2000;177:546-550.
30. Luoma JB, Martin CE, Pearson JL. Contact with mental health and primary care providers before suicide: A review of the evidence. Am J Psychiatry 2002;159: 909-916.
31. Knox K, Litts D, Talcott G, et al. Risk of suicide and related adverse outcomes after exposure to a suicide prevention programme in the US air force: Cohort study. BMJ 2003;327:1376-1378.
32. Harris MF, McKenzie S. Men's health: What's a GP to do? Med J Aust 2006; 185:440-444.
33. Bryan CJ, Rudd MD. Advances in the assessment of suicide risk. J Clin Psychol 2006;62:185-200.
34. Oquendo MA, Bongiovi-Garcia ME, Galfalvy H, et al. Sex differences in clinical predictors of suicidal acts after major depression: A prospective study. Am J Psychiatry 2007;164:134-141.
35. Murphy GE. Psychiatric aspects of suicidal behavior: Substance abuse. In: The international handbook of suicide and attempted suicide. Hawton K, Van Heeringen K (eds). Chichester: John Wiley & Sons; 2000:135-146.
36. Schulberg HC, Bruce ML, Lee PW. Preventing suicide in primary care patients: The primary care physician's role. Gen Hosp Psychiatry 2004;26:337-345.
37. Brownhill S, Wilhelm K, Eliovson G, et al. "For men only." A mental health prompt list in primary care. Aust Fam Physician 2003;32:443-450.
38. Shiner M, Scourfield J, Fincham B, et al. When things fall apart: Gender and suicide across the life-course. Soc Sci Med 2009;69:738-746. BCMJ