Suicide Tourism in Manhattan, New York City, 1990–2004

Charles Gross, Tinka Markham Piper, Angela Bucciarelli, Kenneth Tardiff, David Vlahov, and Sandro Galea

ABSTRACT Suicide accounts for over 30,000 deaths per year in the United States and is associated with psychiatric illness and substance abuse. Research suggests a strong relationship between method of suicide and the lethal means that are readily available in one's community of residence. However, certain individuals may also seek the opportunity for suicide outside their proximal environment, often in well-known places. Whereas prevention efforts have been aimed at certain repeatedly used sites for suicide (i.e., Golden Gate Bridge), little research has studied "suicide tourism," the phenomenon of out of town accompanied by suicide. We collected data on all suicide deaths in New York City (NYC) between 1990 and 2004 from the Office of the Chief Medical Examiner of NYC. We examined trends and correlates of out-of-town residents who committed suicide in NYC. Manhattan accounted for 274 of the 407 nonresident suicides in NYC, which represented over 10% of all suicides committed in Manhattan. The most common methods of suicide for the Manhattan nonresidents were long fall, hanging, overdose, drowning, and firearms; the most common locations included hotels and commercial buildings, followed by outside locations such as bridges, parks, and streets. Nonresident victims tended to be younger, more often white and Asian and less often black and Hispanic than their residential counterparts. An analysis of nonresident suicides in Manhattan revealed that it is a location where individuals travel and take their lives, often by similar means and in similar locations. A comparison with residential suicide implied that a different type of individual is at risk for nonresidential suicide, and further research and prevention efforts should be considered.

KEYWORDS Suicide, Manhattan, New York, Suicide tourism, Access to lethal methods, Suicide prevention, Long falls, Media, Psychopathology

INTRODUCTION

Suicide remains an important source of mortality in the United States, accounting for over 32,000 deaths in 2004. Several risk factors for suicide have been identified. More than 90% of suicide victims have a diagnosable psychiatric

Gross and Tardiff are with the Department of Psychiatry, Weill Cornell Medical College, Cornell University, New York, NY, USA; Gross is with the Subprogram in Clinical Psychology, The Graduate Center, City University of New York, New York, NY, USA; Markham Piper, Bucciarelli, Vlahov and Galea are with the Center of Urban Epidemiologic Studies, New York Academy of Medicine, New York, NY, USA; Galea is with the Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, MI, USA; Galea is with the Department of Epidemiology, Columbia University Mailman School of Public Health, New York, NY, USA.

Correspondence: Charles Gross, c/o Kenneth Tardiff, MD, Department of Psychiatry, Weill Cornell Medical College, Cornell University, 525 E. 68th St. New York, NY 10021, USA. (E-mail: charliegross@gmail.com)

illness²—with depression as the diagnosis most closely associated with suicide attempts.³ Additional risk factors for suicide include comorbid substance abuse and alcoholism, previous suicide attempt, being male, access to lethal methods, poor health care, debilitating physical illness, economic instability, poverty, unemployment, single (marital) status, childhood maltreatment, impulsive or aggressive tendencies, and relational social or financial loss.^{1,2}

Research indicates a strong relationship between the method of suicide and the lethal means available in a given population or community,^{2,4} suggesting that suicide attempters may seek to employ lethal means that are most readily available in their own environment. For example, firearm-related suicides are more prevalent in communities with a high density/availability of firearms.^{2,5–7} These findings imply that individuals may be most likely to commit suicide in a proximate or well-known environment or area. Research on elderly suicide in New York City (NYC) found that fall from height, specifically from an individual's residence, was the preferred lethal method among this population⁸ and jumping from a height is more common in NYC than in the rest of the United States.⁹ Recognizing this relationship, suicide prevention efforts have been proposed that focus specifically on restricting access to lethal methods in a given locale.¹⁰

There is increasing concern about persons who seek opportunities to commit suicide outside of their own environment. ^{9,11,12} Much of this attention and research has been focused on how specific sites and landmarks become spots for repeated or frequent suicides, even for those who live far away from the location. One study on highly utilized jumping locations describes that they can "act as magnets for people from far away, suggesting that the "mystique" of particular locations adds to their attractions as sites for suicidal leaps. ^{9,11} The Golden Gate Bridge in San Francisco, which has been referred to as "the world's leading suicide location," is one example of this phenomenon, and prevention efforts have been developed to counter the desirability and ease of committing suicide from the bridge. ^{12,13} One study of suicides on the Golden Gate Bridge found that half of the victims from a specific area in San Francisco actually commuted over the Oakland Bay Bridge en route to the Golden Gate Bridge, ¹¹ suggesting that there was a preference for this particular site. Another frequently used location for suicide is Niagara Falls, where roughly 20 people per year leap to their deaths. ^{14–16}

Whereas prevention efforts have been aimed at certain sites that are often used for suicide (i.e., suicide fences at the Eiffel Tower and Empire State Building), we know very little about the reasons for the concentration of suicides in specific locations, nor about the characteristics of people who commit suicide in particular destination places. In particular, we are not aware of any research that has explored the number and characteristics of individuals who travel substantial distance to another location to commit suicide, a phenomenon we are calling "suicide tourism." We studied the trends and characteristics of nonresidential suicides in NYC and specifically in the borough of Manhattan to identify factors that may be associated with an increased likelihood of suicide tourism in the largest and most densely populated urban area in the US.

METHODS

All cases of suicide deaths in NYC from 1990 through 2004 were identified through manual review of medical files at the Office of the Chief Medical Examiner of NYC (OCME). The OCME is responsible for assessing all deaths of persons believed to

have died in an unnatural manner. Thus, all suicide deaths in NYC are reviewed by the OCME and would be included in this chart abstraction. Data regarding demographics, cause of death, race/ethnicity, circumstances of death, and toxicology were collected. The OCME uses the decedent's medical history, the circumstances and environment of the fatality, autopsy findings, and laboratory data to attribute cause of death to each case reviewed. NYC residents were classified as having an address of residence located in one of the five boroughs (Manhattan, Brooklyn, Queens, Bronx, or Staten Island); non-NYC residents were classified as having an address of residence not located in one of the five boroughs. We described the number of total suicides and suicides attributable to NYC residents and non-NYC residents each year from 1990 to 2004. We described the demographic characteristics, circumstances of the death, and results of toxicological analysis for all suicide decedents. We used two-tailed chi-square tests to assess the relations between decedent characteristics and the likelihood of nonresident suicide. This study was reviewed and approved by the Institutional Review Boards at the New York Academy of Medicine and the NYC Department of Health and Mental Hygiene.

RESULTS

Table 1 shows the distribution and causes of resident and nonresident suicides in the five boroughs of NYC. Between 1990 and 2004, there were a total of 7,634 suicides that took place in NYC; 7,227 (94.7%) were committed by residents of NYC, and 407 (5.3%) were committed by nonresidents. The three leading causes for NYC resident suicides were hanging/asphyxiation (2,014 deaths or 27.9%), long fall (1,704 deaths or 23.6%), and firearms (1,407 deaths or 19.5%). The three leading causes for non-NYC residents were long fall (149 deaths or 36.6%), hanging/asphyxiation (60 deaths or 14.7%), and firearms (58 deaths or 14.3%).

Of the 407 nonresident suicides in NYC, 274 were committed in Manhattan. This represents 10.8% of the 2,272 total suicides in Manhattan between 1990 and 2004. The 133 nonresidential suicides that occurred in the other four boroughs combined (Brooklyn, Bronx, Queens, and Staten Island) represent 2.5% of the 5,362 suicides in those boroughs. As the nonresidential suicide phenomenon was clustered in Manhattan, we analyzed the distribution, causes, and demographics of both residential and nonresidential suicides in Manhattan.

Table 2 shows the causes of death in all suicides in Manhattan from 1990 to 2004. In the 2,272 suicides committed by Manhattan residents, the five leading causes of death were long fall (763 deaths or 33.6%), hanging/asphyxiation (482 or 21.2%), overdose (451 or 19.9%), firearms (248 or 10.9%), and running over by train (102 or 4.5%). In the 274 suicides committed by nonresidents in Manhattan, the five leading causes of death were long fall (117 deaths or 42.7%), hanging/asphyxiation (36 or 13.1%), overdose (30 or 10.9%), drowning (28 or 10.2%), firearms (28 or 10.2%), and running over by train (23 or 8.4%).

Table 3 shows the demographic characteristics of nonresident and resident suicides in Manhattan. Male victims accounted for 79.9% of nonresident suicides in Manhattan compared to 70.2% among resident suicides. Nonresident suicide decedents were more often white (65.9% nonresident vs. 58% Manhattan residents) and Asian (13.9% vs. 9%) and less often black (11.4% vs. 14.1%) and Hispanic (8.8% vs. 18.9%) compared to the residential suicides. Nonresidents were younger in general compared to Manhattan resident suicides; 17.9% of nonres-

TABLE 1 Suicide cause of death among New York City residents and nonresidents, New York City, 1990–2004

	То	tal	Resid	ents	Nonresident	
	n	%	n	%	n	%
Total	7,634	100.0	7,227	94.7	407	5.3
Overdose: illicit drugs, prescription/unspecified drugs, or alcohol	1,142	15.0	1,100	15.2	42	10.3
Poisons	67	.9	64	.9	3	.7
Gases	75	1.0	70	1.0	5	1.2
Hanging/suffocation/asphyxia	2,074	27.2	2,014	27.9	60	14.7
Drowning	256	3.4	222	3.1	34	8.4
Firearms	1,465	19.2	1,407	19.5	58	14.3
Cutting/piercing	252	3.3	238	3.3	14	3.4
Electrocution	11	.1	10	.1	1	.2
Beating/blunt trauma	2	.0	2	.0	0	.0
Long fall	1,853	24.3	1,704	23.6	149	36.6
short fall	6	.1	5	.1	1	.2
Run over by train or other moving object	334	4.4	297	4.1	37	9.1
Pedestrian struck by motor vehicle/bike/etc	12	.2	12	.2	0	.0
Driver of motor vehicle/bike/etc	3	.0	3	.0	0	.0
Passenger of motor vehicle/bike/etc	1	.0	1	.0	0	.0
Other transportation accident	4	.1	3	.0	1	.2
Injury on subway or train	1	.0	1	.0	0	.0
Boat-related injury	1	.0	1	.0	0	.0
Fires/burns/smoke inhalation	20	.3	20	.3	0	.0
Combined burns and smoke inhalation	9	.1	9	.1	0	.0
Injury from contained fire	36	.5	34	.5	2	.5
Exposure, hypo/hyperthermia, neglect	2	.0	2	.0	0	.0
Other/unknown	8	.1	8	.1	0	.0

^{*}Two decedents had missing cause of death

idential decedents were 15–24 years old, 29.6% were 25–34, 21.9% were 35–44, and 2.6% were over 75 years old. Among residential Manhattan suicides, 10.2% were 15–24 years old, 19.2% were 25–34, 22.1% were 35–44, and 10.9% were over 75 years old.

Of the nonresident suicides, 59.5% were committed in locations coded as "other inside," such as hotels and any other nonresidential interiors; 25.5% were committed in outside locations such as parks, streets, and bridges and 13.1% were committed in another person's residence. Among NYC resident suicides in Manhattan, 75.1% occurred at a residence, 15.8% occurred in an "other inside" location, and 8.4% occurred in an outside setting. Toxicology results indicated that drugs were detected in 38.3% of victims in the nonresidential sample and in 44% of Manhattan residents. Toxicology results were proportionally similar for specific classes of drugs such as opiates, cocaine, alcohol, and antidepressants.

Figure 1 shows the distribution of nonresidential suicide in Manhattan by community districts. Differential shading throughout the borough identifies the frequency and approximate location of suicide deaths. The highest concentration of nonresident suicide (21–40 suicides over the study period) was in the Midtown area of Manhattan, which includes the Empire State Building and many high-rise hotels

TABLE 2	Suicide	cause	of death	among	residents	and	nonresidents	of	New	York	City	that
occurred	in Manha	ttan o	nly, 1990	-2004								

	То	tal	Resid	lents	Nonresident	
	n	%	n	%	n	%
Total	2,546	100.0	2,272	89.2	274	10.8
Overdose: illicit drugs, rx drugs or unspecified drugs, or alcohol	481	18.9	451	19.9	30	10.9
Poisons	17	.7	16	.7	1	.4
Gases	5	.2	4	.2	1	.4
Hanging/suffocation/asphyxia	518	20.3	482	21.2	36	13.1
Drowning	113	4.4	85	3.7	28	10.2
Firearms	276	10.8	248	10.9	28	10.2
Cutting/piercing	76	3.0	69	3.0	7	2.6
Electrocution	7	.3	6	.3	1	.4
Beating/blunt trauma	1	.0	1	.0	0	.0
Long fall	880	34.6	763	33.6	117	42.7
Short fall	2	.1	2	.1	0	.0
Run over by train or other moving object	125	4.9	102	4.5	23	8.4
Pedestrian struck by motor vehicle/bike/etc	4	.2	4	.2	0	.0
Driver of motor vehicle/bike/etc	0	.0	0	.0	0	.0
Passenger of motor vehicle/bike/etc	1	.0	1	.0	0	.0
Other transportation accident	3	.1	3	.1	0	.0
Injury on subway or train	0	.0	0	.0	0	.0
Boat-related injury	1	.0	1	.0	0	.0
Fires/burns/smoke inhalation	7	.3	7	.3	0	.0
Combined burns and smoke inhalation	2	.1	2	.1	0	.0
Injury from contained fire	24	.9	22	1.0	2	.7
Exposure, hypo/hyperthermia, neglect	0	.0	0	.0	0	.0
Other/unknown	3	.1	3	.1	0	.0

and office buildings. Nonresident suicide (21–40 suicides over the study period) was also concentrated in the community district that includes the George Washington Bridge.

DISCUSSION

We examined suicides in New York City, with a special emphasis on nonresident suicides that occurred in Manhattan between 1990 and 2004. We found that over 10% of suicides in Manhattan were committed by nonresidents of New York City. In light of research that shows that most suicides occur in an individual's proximal environment and with readily available means, ^{2,4,15} these data suggest that there are individuals who travel to a distant location and take their lives.

We found that 42.7% of all nonresidents who committed suicide in Manhattan died by a long fall and another 10.2% died by drowning, often caused by a long fall from a structure (i.e., bridge) into a waterway, suggesting that over half of all nonresident suicide victims jumped to their death. Research has shown that jumping from a height is more common in New York than in the rest of the United States, a finding that corresponds to tall heights being an amply available and lethal means in a city whose hallmark is high buildings and bridges, many of them

TABLE 3 Demographic comparison of suicide deaths among out-of-town decedents and residents of Manhattan, Manhattan, 1990-2004

	OT	Total	NYC resident suicide occurring in Manhattan only	nt suicide anhattan only	Non-NYC res	Non-NYC resident suicide occurring in Manhattan only	
	и	%	и	%	и	%	p value
Total	2,546	100.0	2,272	89.2	274	10.8	
Gender							
Male	1,814	71.2	1,595	70.2	219	79.9	.001
Female	732	28.8	229	29.8	55	20.1	
Age							
10–14	9	.2	2	.2	_	4:	<.001
15–24	281	11.0	232	10.2	49	17.9	
25–34	517	20.3	436	19.2	81	29.6	
35–44	563	22.1	503	22.1	09	21.9	
45–54	419	16.5	373	16.4	46	16.8	
55–64	284	11.2	269	11.8	15	5.5	
65–74	221	8.7	206	9.1	15	5.5	
75+	255	10.0	248	10.9	_	2.6	
Race*							
White	1,497	58.8	1,317	58.0	180	62.9	<.001
Black	351	13.8	320	14.1	31	11.4	
Hispanic	453	17.8	429	18.9	24	8.8	
Asian/other race	243	9.6	205	0.6	38	13.9	
Cause of death							
Drugs/alcohol/poisons	498	19.6	467	20.6	31	11.3	<.001
Gases	5	.2	4	.2	_	4.	
Hanging/suffocation/asphyxia	518	20.3	482	21.2	36	13.1	
Drowning	113	4.4	85	3.7	28	10.2	
Firearms	276	10.8	248	10.9	28	10.2	
Long fall	880	34.6	263	33.6	117	42.7	
Hit by a moving train	125	4.9	102	4.5	23	8.4	

	<.001	.075 .250 .020 .440	.356
3.6	13.1 59.5 25.5	38.3 9.1 7.7 27.4 4.7	8.8 8.6 6.9 6.9 7.7 7.7 8.8 7.7 7.7
10	36 163 70	105 25 21 75	16 23 20 19 11 22 22 23 24 25 27 27 27
5.3	75.1 15.8 8.4	44.0 11.4 12.5 29.6 4.9	7.6 8.8 8.8 8.8 7.7 7.7 7.7 6.2 6.2 6.2 6.3 6.3
121	1,706 360 191	999 260 284 673	173 201 190 158 174 171 189 116 140 143
5.1	68.4 20.5 10.3	43.4 11.2 12.0 29.4 4.9	4.888.88.9.7.7.7.6.9.9.9.9.9.9.9.9.9.9.9.9.9.9.9
131	1,742 523 261	1,104 285 305 748 125	189 224 206 176 194 188 181 151 163 163 165
Other method Place of injury	Residence Other Inside Outside	Drugs detected Any drug Cocaine Opiates Alcohol Cannabis	rear of death 1990 1992 1993 1995 1996 1999 2000 2001 2003

*Two decedents missing race ethnicity data (N=2,544)

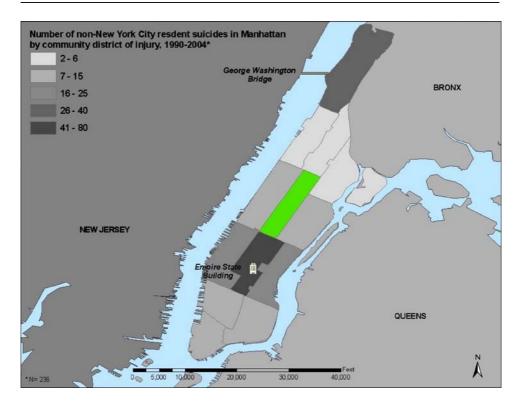


FIGURE 1. Number of non-New York City resident suicides in Manhattan by community district of inquiry, 1990–2004.

well-known. It remains unknown, however, why these individuals who traveled to Manhattan and took their lives have chosen this method as opposed to one closer to their place of residence. One possible explanation is that the individual has a preference for a particular suicide method and seeks it out where it is plentiful and most lethal. Limited research has been conducted on whether individuals with certain psychopathologies gravitate toward certain suicide methods. One comparison of survivors of shooting and jumping suicide attempts concluded that mental status, characterological factors, and psychiatric diagnosis did differ between these two groups. Conversely, we are also interested in the number of individuals that used a universally available method (i.e., hanging, asphyxiation) to commit suicide in Manhattan. This suggests that factors in addition to available lethal methods may play a role in some suicide tourism in Manhattan.

There were several demographic differences between residential and nonresidential suicide decedents in Manhattan. Male victims accounted for nearly 80% of nonresident suicides in Manhattan compared to roughly 70% among NYC residents. Nonresident suicide decedents were more often white and Asian and less likely black and Hispanic than residential counterparts. Nonresidents were younger in general compared to Manhattan resident suicides with significantly higher representation in the 15- to 24- and 25- to 34-year-old brackets and lower in the above-75 bracket. It is possible that there are socioeconomic factors involved in the higher representation of whites and males in the nonresidential sample that are related to greater means and income that makes travel more likely. To some degree,

the younger sample may be representative of a higher concentration of college students; however, in our data collection process, NYC college students were coded as NYC residents even if they had an out-of-town permanent address.

The location type of suicide differed between nonresident and NYC resident suicides. We found that more than half of nonresident suicides (59.5%) were committed in locations including hotels, commercial and nonresidential interiors, followed by 25.5% that were committed in locations such as bridges, waterways, streets, or parks. Only a small percentage (13.1%) committed suicide in a residence (another's), compared to a large majority (75.1%) of NYC resident suicides that occurred in a residence. The high prevalence of NYC resident suicides is consistent with other studies that show a majority of suicides in New York City occur indoors, predominantly in an individual residence.^{7,8} It is plausible that nonresident suicide would be more likely to occur in commercial and outside environments, but specific knowledge of the types of places that are most often used for suicide may help guide prevention efforts that focus on accessibility to lethal means in certain environments.

We found that suicides by nonresidents were clustered in two main areas of Manhattan: Midtown, which is full of high-rise office buildings and tourist attractions (i.e., Empire State Building, Times Square), and near the George Washington Bridge. This finding is particularly relevant, as it identifies specific buildings and landmarks within these areas as sites of multiple suicides (one particular hotel was the site of three suicides over a 20-month period in 2002–2003). This suggests that the prevalence of high buildings, bridges and specific landmarks may elicit this particularly lethal method. Research on suicide in San Francisco has suggested that psychological and symbolic factors associated with the location play a significant part in the choice and reputation of the Golden Gate Bridge as a suicide landmark.¹¹ In other studies of major suicide landmarks, research has posited that well-known sites may possess some symbolic significance or attraction for the individual.^{11,12}

It is also possible that media coverage surrounding suicides in high-profile locations may increase its desirability as a future suicide site. Some research has posited that this influence of suggestion, sometimes referred to as the "Werther Effect," can have an impact on suicide rates¹⁹ and that impactful media stories may raise the suicide risk among vulnerable individuals.^{5,20} Other research has shown that publicity involving a specific means of suicide often results in increased use of that means and an increased number of suicide deaths in general.²¹ All of these factors should be considered in future research on suicide tourism.

LIMITATIONS

There are several considerations relevant to the interpretation of results in this study. Whereas our research introduces the existence and empirical nature of suicide tourism in Manhattan, the study is limited by the information granted through the Medical Examiner files and by confidentiality concerns that disallow us from considering more qualitative aspects of the individual's death such as suicide notes, police reports, and personal/psychiatric histories. These limitations preclude us from directly studying details of any individual's experience, which may illuminate whether the suicidal act was premeditated or impulsive and why he or she chose to commit suicide in Manhattan. One possibility for addressing this aspect of suicide tourism would be to conduct clinical research with survivors of

nonresidential suicide attempts as well as qualitative investigation of forensic and psychiatric evidence.

IMPLICATIONS

Little research has focused on the trends and characteristics of individuals who choose to take their lives outside of their proximate environment. Our empirical analyses present data that describe the demographics, methods, and locations that were involved in suicide tourism in Manhattan and some discussion of why certain individuals, certain means, and certain locales are involved in this phenomenon. As New York City is the most densely populated and culturally diverse city in the US and one that is known for tourism, this and future research will hopefully lead to a greater understanding of why certain individuals travel to specific locales and take their lives in urban areas worldwide. Future research may also consider other qualitative evidence such as suicide notes, forensic evidence, and interviews of survivors of attempted nonresidential suicide. This understanding will eventually make prevention efforts possible that focus on recognizing individuals who are at risk for suicide tourism and restricting access to means and sites that are repeatedly used. As with locations we have cited, such as the Golden Gate Bridge and the Eiffel Tower, certain locales in Manhattan and other urban areas may require further prevention efforts such as greater public awareness, surveillance, available hotline phones, and suicide barriers.

REFERENCES

- US Department of Health and Human Services Centers for Disease Control and Prevention National Center for Injury Prevention and Control. WISQARS Fatal Injury Report. Available at http://www.cdc.gov.ncipc/wisqars/. Accessed January 10, 2007.
- 2. Mann JJ. A current perspective of suicide and attempted suicide. *Ann Intern Med.* 2003;136:302–311.
- 3. Weissman MM. The epidemiology of suicide attempts, 1960 to 1971. Arch Gen Psychiatry. 1974;30:737–746.
- 4. Marzuk PM, Leon AC, Tardiff K, Morgan EB, Stajic M, Mann J. The effect of access to lethal methods of injury on suicide rates. *Arch Gen Psychiatry*. 1992;49:451–458.
- 5. Stack S. Suicide: a 15-year review of the sociological literature part I: cultural and economic factors. *Suicide Life Threat Behav.* 2000;30(2):145–162.
- 6. Beautrais AL, Joyce PR, Mulder RT. Access to firearms and the risk of suicide: a case control study. *Aust N Z J Psychiatry*. 1996;30:741–748.
- 7. Piper TM, Tracy M, Bucciarelli A, Tardiff K, Galea S. Firearm suicide in New York City in the 1990s. *Inj Prev.* 2006;12(1):41–45.
- 8. Abrams RC, Marzuk PM, Tardiff, K, Leon AC. Preference for fall from height as a method of suicide by elderly residents of New York City. *Am J Public Health*. 2005;95(6):1000–1002.
- 9. Gunnell D, Nowers M. Suicide by jumping. Acta Psychiatr Scand. 1997;96:1-6.
- 10. Lester D. Preventing suicide by restricting access to methods for suicide. *Arch Suicide Res.* 1998;4(1):7–24.
- 11. Seiden, RH, Spence M. A tale of two bridges: comparative suicide incidence on the Golden Gate Bridge and San Francisco–Oakland Bay Bridges. *Omega*. 1983;14(3):201–209.
- 12. Friend T. The fatal grandeur of the Golden Gate Bridge. New Yorker. October 13, 2003.
- 13. Mckinley J. San Franciscans try again to suicide-proof the Golden Gate Bridge. *New York Times*. August 11, 2006.

- Hampson R. Man goes 173 ft. down in history at Niagara Falls. USA Today. October 21, 2003.
- 15. Ohberg A. The role of suicide methods in suicide prevention. *Psychiatr Fenn*. 1998;29:141–1449.
- 16. Lester D. Why do people choose particular methods for suicide? *Act Nerv Super (Praha)*. 1988;30(4):312–314.
- 17. De Leo D, Evans R, Neulinger K. Hanging, firearm, and non-domestic gas suicides among males: a comparative study. *Aust N Z J Psychiatry*. 2002;36:183–189.
- 18. de Moore GM, Robertson AR. Suicide attempts by firearms and by leaping from heights: a comparative study by survivors. *Am J Psychiatry*. 1999; 156:1425–1431.
- 19. Phillips DP. The influence of suggestion on suicide: substantive and theoretical implications of the Werther effect. *Am Sociol Rev.* 1974;39:340–354.
- 20. Hassan R. Effects of newspaper stories on the incidence of suicides in Australia. *Aust N Z J Psychiatry*. 1995;29(3):480–483.
- 21. Mishara BL. Suicide in the Montreal subway system: characteristics of the victims, antecedents, and implications for prevention. *Can J Psychiatry*. 1999;44(7):690–696.