



Research report

Psychological strains found in the suicides of 72 celebrities

Jie Zhang^{a,b,*}, Jiandan Tan^c, David Lester^d^a Shandong University School of Public Health, Shandong, China.^b State University of New York College at Buffalo, NY, USA^c Central University of Finance and Economics, Beijing, China^d The Richard Stockton College of New Jersey, NJ, USA

ARTICLE INFO

Article history:

Received 28 January 2013

Accepted 29 January 2013

Available online 22 February 2013

Keywords:

Psychological strain

Suicide

Celebrities

Values

ABSTRACT

The interpretation of suicide involves theories from many disciplines, and the strain theory of suicide is a social–psychological model that attempts to account for this complicated behavior. We have earlier explored the presence of psychological strains in a number of diverse samples of suicides and in the present study, we identified the strains experienced throughout the lives as documented in the biographies of 72 celebrities. The biographies were systematically identified through a number of requirements and composed by one of the authors of this study years before the strain theory of suicide was proposed. A graduate student coder, who was unaware of the strain theory of suicide, was hired to carry out a content analysis of the biography essays and categorize the life events and the responses of the suicide in terms of the four types of strains. Of the 72 suicides, one had no strains, one had all the four strains, four had only one, 30 had two, and 36 had three strains. The most common strain was aspiration strain (97%), followed by deprivation strain (89%), value strain (54%) and coping deficiency strain (4%). It is also noted that religious celebrities were more likely to experience value strain, while those celebrities who had experienced a downhill path in their careers were more likely to experience deprivation and coping strains. This analysis of the 72 celebrity suicides supported the strain theory of suicide.

© 2013 Elsevier B.V. All rights reserved.

1. Introduction

The strain theory of suicide postulates that a psychological strain usually precedes a suicidal behavior (Zhang et al., 2011). Very different from a simple stress, strain is composed of at least two stresses or two forces that are pushing the individual toward different directions. The frustration resulting from psychological strains may lead to personal violence toward society in the form of deviance and crime or toward the self as suicide (Zhang et al., 2011). Apart from the studies about the effects of psychological strains on deviance and criminal behaviors mostly conducted by Agnew and his colleagues (Agnew, 2001), there is little research into the role of psychological strains in suicide. The present study was designed to test the strain theory of suicide with data obtained from the biographies of 72 celebrities who completed suicide, including such individuals as Sigmund Freud (1856–1939) and Ernest Hemingway (1899–1961).

In accounting for suicide risk, the psychological strain theory of suicide consists of four dimensions. Each of the four types of strain is derived from specific sources. A source of strain must

consist of two, and at least two, conflicting social facts. If the two social facts are not contradictory, there should be no strain. The first source of strain is *Conflicting Values*, which happens when two conflicting social values or beliefs are competing in an individual's daily life, such as mainstream culture versus the religious beliefs experienced by a cult member. Another example is the conflicting values or beliefs experienced by some Chinese rural young women between Confucian, traditional gender roles and modern communist ideology on gender equality. When the two conflicting values are equally important in a person's daily life, the person experiences great strain. When one value is more important than the other, there is then no strain. The second source of strain is found in *Aspiration* versus *Reality*, where there is a discrepancy between an individual's aspiration and the reality that the person has to live with, such as wishing to be rich in life versus an unprivileged social status that blocks the road to be success. If the reality is far from the aspiration, the person experiences strain. The larger the discrepancy between aspiration and reality, the greater the strain will be.

Relative Deprivation, the third source of strain, focuses on deprivation in comparison with a reference, such as the relative poverty in which a poor individual lives, along with the knowledge that other people of the same or similar background are leading a much better life. A person living in absolute poverty, where there is no comparison with others, does not necessarily

* Correspondence to: Department of Sociology, State University of New York College at Buffalo, 1300 Elmwood Avenue, Buffalo, NY 14222, USA.

Tel.: +1 716 878 6425; fax: +1 716 878 4009.

E-mail address: zhangj@buffalostate.edu (J. Zhang).

feel bad, miserable, or deprived. Increased perception of deprivation results in relatively greater strain for individuals. *Coping Deficiency*, the fourth source of strain, is a situation in which an individual lacks coping capability when confronting a life crisis. Crises, such as loss of money, loss of status, loss of face, divorce, death of a loved one, etc., may lead to serious strain in the person who does not know how to cope with these negative life events. Less experience in coping results in strain when a crisis takes place. It should be noted that the four types of strain can overlap in many instances, and one individual may experience two or more than two types of strain at a given time, a situation known as *strain clusters* (Agnew, 1992; Stack and Wasserman, 2007).

The strain theory of suicide has been tested and supported with a number of different samples in previous studies. For example, we analyzed the content of accounts of 105 Chinese rural young suicides narrated by the suicides' family members and close friends, and found that each of the suicides experienced at least one type of psychological strain before the suicidal action occurred (Zhang et al., 2009). In our content analysis of a sample of 40 suicide notes obtained in the United States of America from 20 completed suicides and 20 attempted suicides, we found again the relationship between psychological strains and the occurrence of suicide (Zhang and Lester, 2008). In a study to explore the patterns of suicide, we analyzed the 11 suicide cases described in the "Dream of Red Mansions," one of the most famous classical Chinese novels, from the perspective of the strain theory of suicide. We found that the sources of the strain preceding the 11 suicides included (1) discrepancy between aspiration and reality, (2) relative deprivation, and (3) deficient coping skills in front of a crisis, while the value strain from conflicting values was not found among these suicides. It was concluded that the strain theory of suicide is a promising perspective that can be used to analyze the suicide cases in ancient China (Yan et al., 2012).

Using data from 392 suicides and 416 community controls collected in a psychological autopsy case control study for Chinese rural young population aged 15–34 years, we found that prevalence of mental disorders as measured by the Chinese version of SCID was higher among the young Chinese suicides than among the living controls, but was lower than among suicides in the West. Relevant to this current study, psychological strains in the forms of relative deprivation, unrealized aspiration, and lack of coping skills were significantly associated with suicide, even after accounting for the role of mental illness. It concluded that the strain theory of suicide challenges the psychiatric model popular in the West as an explanation of Chinese suicide (Zhang et al., 2011).

An investigation of a suicide's personal history, social background, economic status, previous life events, mental health, interpersonal relations, and events on the day of the suicide may help us understand the causal factors of suicide. More importantly, it allows us to identify the strains experienced by the suicides. The present study, by analyzing the biographies composed by others about the suicides, explores to what extent strains as defined in the theory exist in the suicides, thereby testing the applicability of the strain theory of suicide beyond the studies of Chinese suicides.

2. Methods

Research into the lives of those who die by suicide is made difficult by the lack of information about them. A small proportion of them leave suicide notes which are usually quite brief (Leenaars, 1988), and even fewer leave diaries (Lester, 2004). Occasionally, a sample of suicides who have been administered the same psychological test, such as the MMPI, can be studied (Clopton and Jones, 1975). The most common technique is a

psychological autopsy study in which a standardized interview or questionnaire is given to those who have experienced the loss of a close relative, friend or colleague to suicide (Beskow et al., 1990; Hawton et al., 1998; Zhang et al., 2010), but the information gathered in this way is often biased by the relationship of the person interviewed to the suicidal individual and by the emotions felt as a result of the suicidal death (Brent et al., 1988). In all of these methods, the information is limited.

A rich trove of information is known about famous individuals who have died by suicide and for whom a detailed biography has been written. Over the last 20 years, Lester (2012) has read a large number of biographies of those who have died by suicide, some briefer accounts and some autobiographies. He has summarized the lives of each of these individuals in individual essays and made them available online (www.drdaavidlester.net). A biography of a person typically runs into hundreds of printed pages and covers the life of the person from birth until death, uncovering a wealth of data on the person. The present study is based on these biographies (Lester, 2012).

For the present study, we selected from www.drdaavidlester.net those essays based on a full-length biography. Essays based on shorter essays or articles were not included. Seventy-two biographies met the criteria for inclusion in the study, and they are listed in the Appendix.

One graduate student was trained to read each of the 72 biographies, code the demographic information, and identify the psychological strains found in the biographical essays, if any. The graduate student reader, who did not know the strain theory of suicide at the time of reading the essays, was asked to categorize the life events of each of the 72 celebrities prior to the suicide into any of the four types of psychological strains.

3. Findings

Table 1 shows the frequencies and corresponding percentages for the 72 suicides on each of the four strains: Value, Aspiration, Deprivation, and Coping. Overall for the sample, the celebrity suicides were more likely to be male, married, non-religious, on a downhill path in their career, mentally disordered, using poison, and non-poet/writers. There were no differences for any of the four strains by gender, marital status, mental disorder, suicidal method, and profession.

Of the 72 suicides, one had no strains, one had all the four strains, 4 had only one, 30 had two, and 36 had three. The most common strain was found to be aspiration strain (97%), followed by deprivation strain (89%), value strain (54%) and coping deficiency strain (4%). Celebrities who were religious were more likely to be affected by value strain, and those suicides whose careers were going downhill were more likely to be impacted by deprivation and coping strains.

4. Discussion and conclusion

The strain theory of suicide was supported by the 72 famous suicides using the content analysis of the biographies of the selected celebrities. All but one suicide had at least one psychological strain in the life before suicide. It is also easy to understand aspiration strain being the most common strain among the sampled celebrities. Celebrities are usually more ambitious than most people in the general population, often aspire to higher goals in life and career, and therefore, when reality is held constant for everyone, it is more likely for them to be impacted by the discrepancy between the reality and aspiration. Once way to reduce the aspiration strain so as to bring down the suicide risk

Table 1
Demographic characteristics of the 72 celebrity suicides and the distribution of the psychological strains.

	Total	Type of strain (yes)			
		Value <i>f</i> (%)	Aspiration <i>f</i> (%)	Deprivation <i>f</i> (%)	Coping <i>f</i> (%)
Age (mean, s.d.)	49.11 (15.11)				
Age range	18–87				
Age					
Strain present		51.5	48.1	47.1	48.7
Strain absent		46.3	85.0	65.1	59.7
		$t=1.45$	$t=3.69$	$t=3.41$	$t=1.24$
		$df=70$	$df=70$	$df=70$	$df=70$
		ns	$p < 0.001$	$p=0.001$	ns
	Total <i>f</i> (%) ^a				
Gender					
Male	55 (75.3)	32 (58.2)	54 (98.2)	49 (89.1)	52 (95.6)
Female	17 (23.3)	7 (41.2)	16 (94.1)	15 (88.2)	17 (100.0)
		$X^2=1.51$	$X^2=0.79$	$X^2=0.01$	$X^2=0.99$
		$df=1$	$df=1$	$df=1$	$df=1$
		ns	ns	ns	ns
Marital status					
Married	57 (78.1)	34 (59.65)*	55 (96.49)	50 (87.72)	55 (96.49)
Single	15 (20.8)	5 (3.33)	15 (100.00)	14 (93.33)	14 (93.33)
		$X^2=$	$X^2=$	$X^2=$	$X^2=0.$
		$df=1$	$df=1$	$df=1$	$df=1$
		ns	ns	ns	ns
Religion					
No	51 (69.9)	23 (45.1)	49 (96.1)	43 (84.3)	48 (94.1)
Yes	21 (28.8)	16 (76.2)	21 (100.0)	21 (100.0)	21 (100.0)
		$X^2=5.79$	$X^2=0.85$	$X^2=3.71$	$X^2=1.29$
		$df=1$	$df=1$	$df=1$	$df=1$
		$p < 0.05$	ns	ns	ns
Career status					
Up	15 (20.5)	7 (46.7)	14 (93.3)	11 (73.3)	13 (86.7)
Down	57 (78.1)	32 (56.1)	56 (98.2)	53 (93.0)	56 (98.2)
		$X^2=0.43$	$X^2=1.06$	$X^2=4.64$	$X^2=3.99$
		$df=1$	$df=1$	$df=1$	$df=1$
		ns	ns	$p=0.03$	$p=0.05$
Mental disorder					
Yes	66 (90.4)	37 (56.1)	64 (97.0)	59 (89.4)	59 (89.4)
No	6 (8.3)	4 (66.7)	6 (100.0)	5 (83.3)	5 (83.3)
		$X^2=1.14$	$X^2=0.19$	$X^2=0.21$	$X^2=0.21$
		$df=1$	$df=1$	$df=1$	$df=1$
		ns	ns	ns	ns
Suicide method					
Firearm	15 (20.5)	10 (66.7)	15 (100.0)	14 (93.3)	15 (100.0)
Poison	31 (42.4)	16 (51.6)	29 (93.6)	27 (87.1)	29 (93.6)
Other	22 (30.1)	11 (50.0)	22 (100.0)	20 (90.9)	22 (100.0)
		$X^2=1.18$	$X^2=$ not valid	$X^2=$ not valid	$X^2=$ not valid
		$df=2$	$df=2$	$df=2$	$df=2$
		ns	ns	ns	ns
Profession					
Poet/writer	29 (40.3)	13 (44.8)	29 (100.0)	27 (93.1)	29 (100.0)
Non-poet/writer	43 (59.7)	26 (60.5)	41 (95.3)	37 (86.0)	40 (93.0)
		$X^2=1.71$	$X^2=1.39$	$X^2=0.87$	$X^2=2.11$
		$df=1$	$df=1$	$df=1$	$df=1$
		ns	ns	ns	ns

^a The difference for each of the 7 comparisons in the total frequencies is significant at 0.001 probability level.

is to either improve the reality or lower the aspiration. Psychological counseling may be able to help those suicidal people with aspiration strain through cognitive therapy in which the individual's aspiration is realistically reduced, if the reality is beyond the individual's ability to improve upon.

As observed in earlier studies, one source of value strain is in the social and religious beliefs (Zhang et al., 2011). Those individuals who have confronted a conflict between an unpopular religion's values and mainstream social values tend to experience psychological frustration, and the higher the level of the internalization of the two values, the stronger the value strain

will be. That might be a reason why the religious celebrities scored much higher on the value strain than the non-religious celebrities among the 72 suicides.

When individuals' careers are going downhill, such as from the loss of a job, termination of a contract, the halting of a production, or bankruptcy, psychological counseling is needed for many of them. The person may compare him/herself with others who are still productive and prosperous, with a focus on his/her own deprivation, which could be simply relative in nature. These unrealistic comparisons may lead to psychological strains.

Table A1

1. Diane Arbus	Photographer	1923–1971	USA
2. Reinaldo Arenas	Writer	1943–1990	Cuba/USA
3. Edwin Armstrong	Scientist	1890–1954	USA
4. Walter Benjamin	Writer	1892–1940	Germany
5. John Berryman	Poet	1914–1972	USA
6. Bruno Bettelheim	Psychologist	1903–1990	Austria/USA
7. Charles Boyer	Actor	1899–1965	France
8. Henry Broughton	English nobility	1883–1942	UK
9. Dora Carrington	Painter	1893–1932	UK
10. Viscount Castlereagh	Politician	1769–1822	UK
11. Paul Celan	Poet	1920–1970	Romania/France
12. Thomas Chatterton	Poet	1752–1770	UK
13. Robert Clive	Soldier/Governor	1725–1774	UK
14. Kurt Cobain	Singer	1967–1994	USA
15. Hart Crane	Poet	1899–1932	USA
16. Sergei Esenin	Poet	1895–1925	Russia
17. James Forrestal	Politician	1892–1949	USA
18. Sigmund Freud	Psychiatrist	1856–1939	Austria
19. Konoé Fumimaro	Politician	1891–1945	Japan
20. Judy Garland	Actress	1922–1969	USA
21. Mark Gertler	Painter	1891–1939	UK
22. Charlotte Perkins Gilman	Feminist	1860–1935	USA
23. Joseph Goebbels	Nazi minister	1897–1945	Germany
24. Arshille Gorky	Painter	1904–1948	USA
25. Kenneth Halliwell	Writer	1926–1967	UK
26. Tom Heggen	Writer	1919–1949	USA
27. Ernest Hemingway	Writer	1899–1961	USA
28. Ludvik Hoch	Businessman	1923–1991	UK
29. Abbie Hoffman	Yippie—writer	1936–1989	USA
30. Robin Hyde	Poet	1905–1939	New Zealand
31. Paul Kammerer	Scientist	1880–1926	Austria
32. Weldon Kees	Poet/Writer	1914–1955	USA
33. Jerzy Kosinsky	Writer	1933–1991	Poland/USA
34. Vladimir Kovalovskii	Scientist	1842–1883	Russia
35. Alan Ladd	Actor	1913–1964	USA
36. Robert La Follette	Politician	1895–1953	USA
37. Primo Levi	Writer, Holocaust vict	1919–1987	Italy
38. Vachel Lindsay	Poet	1879–1931	USA
39. Georg List	Economist	1789–1846	Germany
40. Ross Lockridge	Writer	1914–1948	USA
41. Jack London	Writer	1876–1916	USA
42. Eleanor Marx	Marx's daughter	1855–1898	UK
43. Vladimir Mayakovsky	Poet	1893–1930	Soviet Union
44. Aimee Semple McPherson	Preacher	1890–1944	USA
45. Hugh Miller	Scientist	1802–1856	UK
46. Yukio Mishima	Writer	1925–1970	Japan
47. Marilyn Monroe	Actress	1926–1962	USA
48. Gerard de Nerval	Writer	1808–1855	France
49. Phil Ochs	Folk singer	1940–1976	USA
50. Cesare Pavese	Poet/writer	1908–1952	Italy
51. Sylvia Plath	Poet	1932–1963	USA
52. Freddie Prinze	Comedian	1954–1077	USA
53. Lewis Puller	Soldier/Politician	1945–1994	USA
54. Mark Rothko	Painter	1903–1970	USA
55. Crown Prince Rudolph	Royalty	1858–1889	Austria
56. Anne Sexton	Poet	1928–1983	USA
57. Elizabeth Cody Stanton	Feminist	1815–1902	USA
58. Victor Tausk	Psychoanalyst	1879–1919	Hungary
59. Sara Teasdale	Poet	1884–1933	USA
60. Ernst Toller	Activist/Writer	1893–1939	Germany/USA
61. Marina Tsvetaeva	Writer	1892–1941	Russia
62. Kurt Tucholsky	Writer	1890–1935	Germany
63. Alan Turing	Computers	1912–1954	UK
64. Randy Turpin	Boxer	1928–1966	UK
65. Vincent van Gogh	Painter	1853–1890	Netherlands
66. Stephen Ward	Osteopath	1912–1963	UK
67. Simone Weil	Teacher	1909–1943	France
68. Otto Weininger	Psychologist	1880–1903	Austria
69. Dolly Wilde	Socialite	1895–1941	UK
70. Virginia Woolf	Writer	1882–1941	UK
71. Gig Young	Actor	1913–1978	USA
72. Stephan Zweig	Writer	1881–1942	Austria

This study using biographies has several limitations. First, the original biography may not have uncovered all of the information necessary to test a psychological hypothesis. Lester selected from the biographies only a limited amount of information to include

in his essays. On the other hand, the original biographers and Lester were not testing any psychological hypothesis about suicide when they wrote the biography and the essay, respectively. Thus, the data, when coded for analysis, as in the present

paper, is most likely not biased in favor of or against any hypothesis.

A methodological problem in coding the information is the size of the written material. It would be ideal to have at least two judges read the material in order to code the data. However, it would be difficult to get a second reader to read all (in the present study 72) biographies. Even the 72 essays on these suicides amount to over 1000 pages. Therefore, in this exploratory study, we have used one judge to read the 72 essays and code them for the information required. If the results of this study prove to be interesting, then future research could utilize a smaller subset of suicides and two or more judges.

Another limitation is that, in order to have a biography written about a person (whether a suicide or not), he or she must be famous. The question arises, therefore, whether famous individuals who die by suicide resemble “typical suicides,” that is, the million or so individuals who die by suicide each year. The answer is “maybe not,” but we can still obtain important information from these famous suicides. For example, Lester (1989) reported that, in the first 30 biographies he read, 15 of the suicides had lost a parent or parent-substitute, and 14 of these losses occurred during the latency period (that is, aged 6–14). This result was surprising at the time since it would have been predicted that the loss would have occurred during the first six years of life, and so the report sensitized researchers to the potential importance of loss during latency (Lester, 1989). Thus, the limitation of studying famous suicides is balanced by the richer trove of data that we have on these individuals.

Role of funding source

There is no funding for this study.

Conflict of interest

There is no conflict of interest.

Acknowledgment

We do not have a grant to acknowledge.

Appendix A

Please see Table A1.

References

- Agnew, Robert, 1992. Foundation for a general strain theory of crime and delinquency. *Criminology* 30 (1), 47–87.
- Agnew, Robert, 2001. Building on the foundation of general strain theory: specifying the types of strain most likely to lead to crime and delinquency. *Journal of Research in Crime and Delinquency* 38, 319–361.
- Beskow, J., Runeson, B., Asgard, U., 1990. Psychological autopsies: methods and ethics. *Suicide and Life-Threatening Behavior* 20, 307–323.
- Brent, D.A., Perper, J.A., Kolko, D.J., Zelenak, J.P., 1988. The psychological autopsy: methodological considerations for the study of adolescent suicide. *Journal of the American Academy of Child and Adolescent Psychiatry* 27, 362–366.
- Clopton, J.R., Jones, W., 1975. Use of the MMPI in the prediction of suicide. *Journal of Clinical Psychology* 31, 52–54.
- Hawton, Keith, Appleby, L., Platt, S., Foster, S., Cooper, J., Malmberg, A., Simkin, S., 1998. The psychological autopsy approach to studying suicide: a review of methodological issues. *Journal of Affective Disorders* 50, 269–276.
- Leenaars, A.A., 1988. *Suicide Notes*. Human Sciences Press, New York.
- Lester, David, 1989. Experience of personal loss and later suicide. *Acta Psychiatrica Scandinavica* 79, 450–452.
- Lester, David, 2004. *Katie's Diary*. Brunner-Routledge, New York.
- Lester, David, 2012. *Bibliographic Studies in Suicide: David Lester's Home Page* www.drdaavidlester.net.
- Stack, Steven, Wasserman, Ira, 2007. Economic strain and suicide risk: a qualitative analysis. *Suicide and Life-Threatening Behavior* 37 (1), 103–112.
- Yan, Shengming, Zhang, Jie, Zhao, Lin, 2012. Suicides in a Dream of Red Mansions: a perspective of the strain theory of suicide. *Journal of Shandong University (Philosophy and Social Sciences)* 2012 (1), 139–147.
- Zhang, Jie, Dong, Nini, Delprino, Robert, Zhou, Li, 2009. Psychological strains found from in-depth interviews with 105 Chinese rural youth suicides. *Archives of Suicide Research* 13 (2), 185–194.
- Zhang, Jie, Lester, David, 2008. Psychological tensions found in suicide notes: a test for the strain theory of suicide. *Archives of Suicide Research* 12 (1), 67–73.
- Zhang, Jie, Wieczorek, William F., Conwell, Yeates, Tu, Xin Ming, 2011. Psychological strains and youth suicide in rural China. *Social Science and Medicine* 72 (12), 2003–2010.
- Zhang, Jie, Wieczorek, William F., Conwell, Yeates, Tu, Xin Ming, Wu Wu, Bill Yow, Xiao, Shuiyuan, Xian Jia, Cun, 2010. Characteristics of young rural Chinese suicides: a psychological autopsy study. *Psychological Medicine* 40 (4), 581–589.