Suicide Studies, 2021, 2(2)

Contents

Suicide Studies, 2021, 2(2)

SUICIDE BY JUMPING: WHY DO WOMEN SURVIVE MORE OFTEN?

David Lester

Abstract: Women survive suicidal actions more often than do men, including suicide by jumping. A review of research indicates that women jump from similar heights as do men but survive more often. Possible reasons for this are explored.

Men complete suicide at higher rates than women, while women attempt suicide at higher rates than men (Canetto & Lester, 1995; Lester, 1983). Lester (1969) noted that women choose different methods for suicide than do men, and their methods are less lethal. For example, Lester found that women choose firearms for suicide less often than men and, when they do choose firearms, are more likely to shot themselves in the body rather than in the head. However, Lester found that, for each possible method chosen, women dies at a lower rate than do men.

An alternative explanation for this may be that women survive suicidal actions because generally they are physiologically stronger than men. One way to explore this sex difference in survival is by studying those who use jumping for their suicidal act. It has been reported that women survive falls into water better than do men.

The Height of the Jump

Gupta, Chandra, and Dogra (1982) claimed that men dying by suicide jump from taller places than women dying by suicide, A statistical analysis of the data by the present author (Lester, 2003) from Gupta, *et* al., obtained from 15 men and 12 women jumping to their death in India found that the sex difference in the heights from which these 27 suicides jumped was not statistically significant on a Kolmogorov-Smirnov two-sample test (men 49 feet and women 42 feet; $\chi^2 = 1.26$, df=1, n.s.).

Hanzlick, Masterson, and Walker (1990) studied 18 suicides from hotels in Fulton County, Georgia, USA. Analysis by the present author of their data indicated no statistically significant differences in the height of the jumps of the 114 men and 4 women (20.4 and 22.0 floors, respectively; t_{16}=0.32).

Risser, et al. (1996) looked at 32 deaths and 64 survivors of falls (both suicidal and accidental combined) and found no significant sex differences in the mean height of the fall for the two groups (66 men and 30 women).

Data on 321 completed suicides by jumping from five provinces and cities in China were available from a study by Mao, et al. (2009; Mao & Lester, 2010) of suicidal and accidental cases of high-fall deaths. There were 150 women and 171 men in the sample of suicides. Their mean age was 40.3 yr. (*SD* = 18.8, range = 14–96) and the mean estimated height from which they jumped was 22.1 m (*SD* = 17.0, range = 4–111). The point-biserial correlation between the

height and sex was –0.01 and the Pearson correlation between the height and age was –0.07, both nonsignificant. Neither age nor sex predicted the height when both variables were placed in a full multiple regression using SPSS (betas = –0.07 and 0.01, respectively, $R^2 = 0.005$).

Survival Rates

Robertson, et al. (1978) studied suicides from the Aurora Bridge in Seattle, a 50-meter fall into water. Of the suicides, 83 were men and 41 women; of those who survived the jump, 5 were men and 13 were women. The present author calculated the chi-square value as 10.23 (p=.0014). Robertson, et *al.* noted, however, that the women jumpers were younger than the men jumpers (median ages of 28 and 39 yr., respectively). Researchers should control for age. Data from the same bridge from Fortner, et al. (1983) indicated that 10% of the 108 men survived compared to 23% of the 69 women.

Discussion

It appears from this review that men and women jump from similar heights for suicide if given a choice. However, when not given a choice, as for those who jump from a particular bridge, women do survive at a higher rate than do men. What are the reasons for this?

Katz, et al. (1988) rated the severity of injury of men and women who attempted suicide by jumping from heights between six and 12 meters, and it should be noted that these are low heights compared to those who jump from bridges where the height may be 50 meters or more. Analysis of their ratings of severity of injury for 15 women and 10 men showed that the women and men did not differ in the severity of injury (means 21.0 and 22.9, SDs = 9.2 and 9.2; $t_{23} = 0.51$). (There was no significant difference in the heights from which the women and men jumped.) These data were all from survivors, and it would be of interest to have a sample which included completed suicides as well as attempted suicides.

Kurtz, et al. (1987) studied four jumpers from the Brooklyn Bridge in New York City with falls of 41 to 49 meters. All survived, but the severity of their injuries differed. Kurtz, et al noted that the kinetic energy and momentum involved in the fall are dependent on the height of the jump and to the weight of the jumper. The two jumpers who were more seriously injured had 40%-50% more kinetic energy than the other two jumpers. Men, on average weigh more than do women. The angle of entry into the water also impacts survival rates, with horizontal entry much more deleterious. The position when falling affects the aerodynamic drag and the impact on the body on hitting the water. Finally, Kurtz, et al. noted that the temperature of the water may also affect survival rates.

The age of the person falling affects the survival rate, with older people surviving less often (Snyder, 1965). Yeh and Lester (2010) found that the mean age of Golden Gate Bridge suicides during the period 1999-2009 was 42 (range 14-85), somewhat older than an early sample from 1976-1977 (mean age 35) (Kirch & Lester, 1986). Bateson (2012) discussed the 32 survivors of jumps from the Golden Gate Bridge and noted that most were in the teens and

twenties. The individual cases that he discussed ranged in age from 16 to 28. It is clear, therefore, that young jumpers are more likely to survive than are older jumpers.

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Suicide Studies, 2021, 2(2)

SUICIDE FROM THE SKYWAY BRIDGE

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Abstract

Suicides from the Skyway Bridge in Florida are analysed for the period 1957-2014. Men were more likely to jump from this bridge, but no more likely to die from the jump or be saved from jumping. Women suicides were more likely to leave a suicide note. There is the possibility that the publicity given to suicides, both in the Florida press (newspapers and online) and the documentation of the suicides by the Skyway Bridge authorities may contribute to the growing use of the bridge for suicide.

Suicide by jumping from bridges is common, with the most famous venue being the Golden Gate Bridge in California (Yeh & Lester, 2010), but many bridges that are less well-known have suicides, such as the Delaware Memorial Bridge that links New Jersey and Delaware (Lester, 2003) which has an average of 2,6 suicides each year (range 0-9). The Bob Graham Sunshine Skyway Bridge spanning Tampa Bay in Florida is unique in that an independent group documents the suicides from the bridge (www.skywaybridge.com).[1] The main span of the bridge is 4.1 miles and the height at the peak is 431 feet. The bridge was completed and opened to traffic on April 20th, 1987.

Crisis hotline telephones were installed on the bridge in July 1999, and Stack (2015) found that the number of suicides rose by 4.5 per year after the installation compared to the years before, while the suicide rate in Florida declined. Although 26 potential suicides were saved in the ten years after the telephones were installed, Stack suggested that barriers were probably better at preventing suicides than telephones.

Those Who Jumped[2]

From 1957 to May 2014, 328 people jumped off the Skyway Bridge. Of these 70.8% were men and 29.2% women. Their mean age where known was 40.1 years (SD = 15.5), and men and women did not differ in age (39.9 and 40.8, respectively, SDs 16.5 and 13.0 t = 0.45, df =284). Regarding outcome, 66.4% died, 11.0% lived, 1.2% were never found, and 21.4% were prevented from jumping. Only 10.7% left a suicide note, but women were more likely to leave a note than were the men (17.9% versus 7.9%, $X^2 = 6.94$, df = 1, p = .008).

From the reports on the website for the bridge, 84.8% of the jumpers were identified while 15.2% of the jumpers were not named. The modal month for jumping was September (12.2%), with July and August tied for the next most popular months (11.3%) and January with the fewest (4.9%). Monday was the most popular day of the week (18.3%), followed by Thursday (16.2%), with Saturday having the fewest (11.0%). The jumpers were spread over the

[1] The bridge is maintained by the Florida Department of Transportation.

[2] Two people jumped twice, having been saved the first time. They were counted only once in these statistics. Two other "jumpers" were hoaxes and their data were excluded.

hours of the day with 5-6 pm having the most jumpers (8.3%) and 9-10 am 9-10 pm and 11 pm-midnight having the fewest (2.2%). There was a tendency for more jumpers to be from the southbound side (63.0%) than from the northbound side (37.0%) although 42.2% of the suicides had this information missing.

Men and Women Suicides

Men and women did not differ in age, as noted above, but the women were more likely to leave a suicide note. Men and women did not differ in marital status (here there was much missing data), the direction of travel to the jumping site (north bound versus south bound), the day of week, or the month of the year.

The men and women did not differ in the percentage who died (means 88% and 81%, respectively, $\chi^2 = 1.96$, n.s.) or in the percentage saved (21.6% and 22.3%, respectively, $\chi^2 = 0.02$, n.s.).

Comment

The Skyway Bridge is unique in having detailed information available online on the suicides from the bridge and in providing press reports of the suicides by an independent group. Although telephone hotlines were provided on the bridge in 1999, suicides continued to rise in numbers after their installation. In 2021, construction of a barrier is underway.

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Suicide Studies, 2021, 2(2)

EXPLORATORY FACTOR ANALYSIS OF THE ENTRAPMENT SCALE IN IRANIAN STUDENTS[3]

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Abstract

This goal of the present study was to explore the validity and reliability of the entrapment scale with students at an Iranian university. A sample of 306 students (102 men and 204 women) was selected using simple random sampling. An exploratory factor analysis with varimax rotation was employed. Beck's hopelessness and depression scales were used to examine the convergent validity of the entrapment scale. The results of the present research identified two subscales labeled Internal Entrapment and External Entrapment. Together, these two factors explained 61% of the variance of the matrix of item-correlations. The internal consistency using Cronbach's alpha was 0.93 for the total scale, 0.89 for Internal Entrapment and 0.90 for External Entrapment. There were significant correlations between Beck's hopelessness and depression scale scores with scores on the entrapment scale and with the factor scores. The conclusion is that the Entrapment Scale has good reliability and validity in Persian culture.

Flight is one of the defensive mechanisms often used by both humans and animals to cope with fear and stressful conditions. However, sometimes flight is impossible. In such cases, feelings and emotions such as fear, anxiety and hopelessness are experienced as well as, on occasions, a feeling of entrapment or an inability to escape the stressful situation.

The results of studies on animals indicate that experiencing a sense of entrapment is associated with behaviors resembling depression, and studies on humans have confirmed this (Dixon 1998; Gilbert, 2001). Gilbert and Allen (1998), using the theory of social rank, introduced the concept of entrapment. According to this theory, one of the factors affecting people's self-confidence is their social rank in the community, and people are constantly trying to maintain and enhance their social rank. Sometimes they are at risk of losing their social position or rank, and this leads them to experience feelings such as entrapment. Extensive research has been done on the feeling of entrapment, and its association with suicide, depression and hopelessness has been confirmed (Acosta et al., 2012; Chang et al., 2010).

Social rank theory was derived from studies on animals. Price (1972) noted that, in animals' lives, one of the factors affecting self-confidence and achieved goals is their social rank. In other words, whoever has a higher social rank will definitely have more power. Overcoming a rival is one of the major conditions for acceptance in a group. In a fight that occurs between animals, one loses, and the loss will result in behavioral responses associated with defeat and entrapment (Dixon, 1998; Gilbert, 2001; Grant & Mackintosh, 1963; Ratner &

[3] The present research was funded by Allameh Tabataba'i University.

Thompson, 1960). McLean (1990) argued that, for animals on the brink of defeat, the problems caused by fleeing the scene are less than those from staying in the fight field.

One of the common defense mechanisms in humans and animals is "flight" (Dixon, 1998; Dixon et al., 1989). However, when flight is not possible, arrested flight is stressful (Dixon, 1998; Dixon et al., 1989). In this case, the person shows behaviors such as staring, averted gaze reduced environmental scanning, and frozen or immobile postures (Dickson, 1998).

Dixon et al. (1989) demonstrated arrested flight in the humans by placing the interviewee's chair in front of the exit door and then asking questions to which the people could not respond. Dixon et al. observed behaviors that that have been seen in animals, including staring, averted gaze, reduced environmental scanning, and immobilization. Subsequent studies revealed that this type of behavior is seen much more in depressed people than in other people.

Research has shown that entrapment can be divided into two subclasses: outer entrapment that includes environmental events and conditions constraining the individual, and inner entrapment that is related to a people's thoughts and feelings about their own inabilities and deficiencies (Williams & Williams, 1997; Gilbert & Gilbert, 2003; Gilbert et al., 2005). Factors affecting people's feeling of entrapment include no access to resources of support (whether by the family or society), a high sense of guilt (Gilbert et al., 2004), no outcome seen as possible, and being bullied from the friends (Leahy, 2000).

It has also been noted that suicide can be viewed as a flight from the crisis and, on some occasions, a flight from "oneself" (Baumeister, 1990; Hayes et al., 1996; Williams and Williams, 1997). This notion was included in Mark Williams's "cry of pain" model (COP) (Williams & Williams, 1997; Williams et al., 2005). Taylor et al. (2011) have pointed out that entrapment is experienced more by people who experience higher social anxiety, while Brown et al. (1995) concluded that those of lower social rank experience the feeling of inferiority and entrapment more.

Entrapment has been noted in other situations such as occupational and professional settings. For example, Wood and Rowe (2011) introduced the sense of entrapment as one of the factors affecting the success and failure of managers. A manager who has feelings of entrapment in his work is not interested in and motivated adequately in the pursuit of his work and this has a negative impact on productivity (Cardon et al., 2009). Strong feelings of entrapment reduce the risk taking by managers (Wood and Rowe, 2011). Wood and Pearson (2009) noted that conservative people who have higher fear of defeat usually avoid situations where the possibility of defeat is high.

Hopelessness has been defined as having negative expectations about the future and life as well as a sense of futility (Do et al., 2010). Hopeless people, when in new situations, have negative thoughts about themselves and these thoughts are obstacles to their success (Kubzansky et al., 2005). Beck (1967) noted that hopelessness is one component of depression. According to Beck's cognitive model, depressed people blame themselves for their problems. They view defeat as an inevitable consequence of any struggle, and the difficulties that lie ahead of them seem insoluble.

Researchers have documented the existence of a strong relationship between hopelessness and suicide (Houghton and Van Heeringen, 2009; David Klonsky et al., 2012). For example, Acosta et al. (2012) found that hopelessness was an important risk factor for the high suicide rate in bipolar patients. In recent years, the researchers have pointed the relationship between hopelessness and entrapment (Gilbert and Allan, 1998; O'Conno, 2003; Gilbert et al., 2005; Martin et al., 2006; Rasmussen et al., 2010). Johnson et al. (2008) noted the conceptual overlap between hopelessness and entrapment. Hopelessness can result in people experiencing entrapment. It may be that hopelessness facilitates the experience of entrapment, the experience of entrapment can result in hopelessness, or hopelessness and entrapment may be different aspects of the same variable (O'Connor, 2003).

Hitherto, no studies have been carried out on the experience of entrapment in Iranian culture, and the present study was designed to fill this gap.

Method

Participants

The entrapment scale was completed by 102 male and 304 female undergraduate and graduate students at Allameh Tabataba'i University in Iran who were selected randomly. Their mean age was 31.75 years (SD = 13.27; range 16-75). The students belonged to different colleges, including psychology, law, literature, management; economics and accounting. Only 306 inventories were returned of 350 distributed. All participants completed the inventory voluntarily and anonymously.

Measures

The Entrapment Scale

The Entrapment Scale (Gilbert & Allan, 1998) has 16 items, answered on a 5-option Likert-type scale with anchors "completely disagree" to "completely agree". In previous research, Cronbach alphas coefficient ranged between .86 and .93 (Taylor et al., 2009) and between .82 and .90 for the subscales of inner and outer entrapment (Gilbert & Allan, 1998).

For the present study, the entrapment scale was translated by two translators separately from English into Persian. Then, the inventory was given to 6 psychology and counseling professors from the Faculty of Psychology and Educational Sciences, Allameh Tabataba'i University, to check the translation. After making changes, the scale was back-translated into English and sent to the original creator of the scale for corrections. His proposals were applied to Persian translation.

Beck Depression Inventory II (BDI-II)

The BDI-II is a revised form of Beck Depression Inventory that was developed to measure the intensity of depression (Beck et al., 1996) and to be more consistent with DSM-IV

Diagnostic & Statistical Manual of Mental Disorders-IV. Like the original Beck Depression Inventory, the BDI-II also has 21 questions and the symptoms of depression. This scale has previously been translated into Persian with good split-half, Cronbach alpha and test-retest reliability (> 0.81) (Dobson & Mohammad Khani, 2007).

Beck Hopelessness Scale

The Beck Hopelessness Scale (BHS: Beck, et al., 1974) was developed to measure the cognitive components of depression, such as negative expectations about future events. The test has 20 items answered as true or false. The range of scores is 0 to 20. The BHS has previously been translated into Persian and used in research on Iranian students with good reliability (Cronbach = 0.86) (Dejkam, 2004).

Data analysis

Analysis of the data used SPSS to assess reliability, to explore Pearson correlations between the scale scores, and for a factor analysis (a principal components extraction and varimax rotation).

Results

The Cronbach alpha reliability coefficients are shown in Table 1, where it can be seen that they were all > 0.88. Using the Kaiser criterion, two factors were extracted with eigenvalues of 8.60 and 1.15, accounting for 53.7% and 7.2% of the variance, respectively. The first factor corresponded to external entrapment and the second factor to internal entrapment. The results of the factor analysis are shown in table 2, with loadings greater than 0.50 shown.

Table 3 shows the Pearson correlations between the scale and subscale scores. Entrapment scores, both internal and external, was strongly correlated with depression scores and moderately correlated with hopelessness scores.

Discussion

The purpose of the present study was to explore the use of the Entrapment Scale in Iranian society. The concept of entrapment concept is based on the theory of social rank. The results of scientists' research on animals' defensive behaviors showed that, if they failed in a fight and were unable to flee from the scene (arrested flight), they experience entrapment which leads to behavioral responses such as averted gaze and reduced scanning. Subsequent research on humans found behaviors resembling depression as a result of arrested flight (or entrapment).

The present study found that the Entrapment Scale had good internal consistency, and that two reliable subscales could be identified labelled as internal entrapment and external entrapment. External entrapment results from forces external to the person preventing escape, while internal entrapment results from the individual’s own limitations. Good construct validity was found for the Entrapment Scale through high correlations of entrapment scores with depression and hopelessness scale scores.

This study, therefore, has shown that the Entrapment Scale and its subscales may be used in Iranian subjects. Future research could now explore the usefulness of Gilbert's escape theory of depression and suicide in Iranian subjects, including psychiatric patients. The scale may also be of use for clinicians when evaluating and treating depressed and suicidal patients.

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Table 1: Cronbach alpha coefficients for the Entrapment scale and the subscales.

Alpha coefficients	Total	Internal Entrapment	External Entrapment
Total	0.93	0.89	0.90
Male	0.95	0.91	0.91
Female	0.93	0.88	0.89

Table 2: Results of the factor analysis (loadings > 0.50 shown)

	Component 1	Component 2
Item 1		0.771
Item 2		0.695
Item 3		0.739
Item 4		0.802
Item 5		0.739
Item 6		0.824
Item 7	0.790	
Item 8	0.779	
Item 9	0.519	
Item10	0.785	
Item 11	0.779	
Item 12	0.640	
Item 13	0.742	
Item 14	0.564	
Item 15	0.790	
Item 16	0.693	

Items

1 I want to get away from myself
2 I feel powerless to change myself
3 I would like to escape from my thoughts and feelings
4 I feel trapped inside myself
5 I would like to get away from who I am and start again
6 I feel I'm in a deep hole I can't get out of
7 I am in a situation I feel trapped in
8 I have a strong desire to escape from things in my life
9 I am in a relationship I can't get out of
10 I often have the feeling that I would just like to run away
11 I feel powerless to change things

12 I feel trapped by my obligations
13 I can see no way out of my current situation
14 I would like to get away from other more powerful people in my life
15 I have a strong desire to get away and stay away from where I am now
16 I feel trapped by other people

Table 3: Pearson correlations between scale and subscale scores (all significant $p < .01$)

	Depression	Hopelessness
Entrapment	0.70	0.55
Internal entrapment	0.67	0.54
External entrapment	0.67	0.52

Suicide Studies, 2021, 2(2)

PERSONAL CHARACTERISTICS AND THEORETICAL CONSTRUCTS IN FAMOUS SUICIDES

David Lester & John F. Gunn III

Abstract:

The strain theory of suicide and the Interpersonal Theory of Suicide were examined in 72 famous suicides. The two theories were relatively independent and, therefore, appeared to complement each other. Both were relatively independent of the characteristics of the suicides and their actions.

Recently, two theories of suicide have been applied to 72 famous suicides or, more accurately, suicides whose lives and deaths generated sufficient interest that a biography was written about them. Zhang, et al. (2013) rated the lives of the 72 suicides for the presence of four strains (value, aspiration, deprivation, and coping), defined as two conflicting social facts (social values or beliefs, aspirations and reality, deprivation of oneself compared to others, and coping ability in times of crisis).

Lester and Gunn (2021) rated the 72 suicides for the presence of the three variables proposed by Joiner (2005) in his Interpersonal Theory of Suicide (IPTS): thwarted belongingness, perceived burdensomeness and the acquired capability for self-harm. Lester and Gunn found that only 11 of the 72 (15.3%) suicide decedents were judged to have perceived burdensomeness compared to 65 (90.3%) and 48 (66.7%) for thwarted belonging and the acquired capability, respectively.

The present note explores whether the characteristics of the suicides is associated with the presence of the variables proposed by Zhang's strain theory and Joiner's IPTS.

Method

The 72 suicides were those used in the studies by Zhang, et al. (2013) and Lester and Gunn (2021). The characteristics of the suicides studied were: age and sex and whether they were at home for their suicide, whether they were alone, and whether they used a violent method for suicide. The strains were rated as 1 present and 2 not present. The variables from the IPTS were rated as 0-4 depending upon how sure the two judges were that the variable was present in the lives and deaths of the 72 suicides.

Results and Discussion

Table 1 presents the associations between the variables proposed by strain theory and the IPTS. Only the deprivation strain was associated with the IPTS variables. Those who had the presence of deprivation strain were more likely to perceived themselves as a burden to others and less likely to have the acquired capability for self-harm.

Table 2 presents the Pearson correlations between the variables proposed by the two theories and the characteristics of the suicides. For the IPTS, the presence of the three theoretical variables (PB, TB and AC) was independent of the characteristics of the suicides with one exception. Those who were rated as having perceived burdensomeness present were more likely to die by suicide while isolated from others. The presence of strains in the suicides was associated with only one characteristic of the suicides. The older suicides were more likely to have aspiration and deprivation strains present.

The results of this study show, first of all, that strain theory and the IPTS are relatively independent theories of suicide and may, therefore, complement each other in explaining the suicide of an individual. Secondly, the presence of the theoretical variables proposed by the two theories are relatively independent of the characteristics of the suicides and may, therefore, be considered to be relevant for most, if not all, suicides.

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Table 1: Associations between the variables proposed by the two theories

	PB	AC
TB	+0.01	+0.07
PB		-0.27*

	value	aspiration	deprivation	coping
PB	-0.03	-0.20	-0.30**	+0.01
TB	-0.17	+0.06	+0.00	+0.08
AC	-0.02	-0.09	-0.24*	+0.15

TB: thwarted belonging
PB: perceived burdensomeness
AC: acquired capability for self-harm

Table 2: Correlations of the characteristics of the suicides and the theoretical variables (n=72)

	age	sex	alone	home	violent method
PB	-0.11	-0.12	+0.32**	-0.02	+0.10
TB	+0.15	+0.00	+0.09	+0.05	-0.04
AC	-0.11	-0.17	-0.04	+0.01	-0.02
Value	-0.06	-0.11	+0.06	-0.05	-0.02
Aspiration	+0.42***	-0.11	-0.18	+0.11	-0.17
Deprivation	+0.37***	-0.02	-0.03	+0.02	+0.01
Coping	-0.16	-0.11	+0.09	-0.13	+0.21

TB: thwarted belonging
PB: perceived burdensomeness
AC: acquired capability for self-harm

Suicide Studies 2021, 2(2)

MULTICULTURAL EXPLORATIONS OF SUICIDE

David Lester

There are large differences in the rates and patterns of suicide across cultures. For example, it is well-documented that suicidal behavior varies by country and by regions within a country (Lester, 1994b, 1996), but a definition of multicultural is - relating to or constituting several cultural or ethnic groups *within* a society. Given this definition, what is most noteworthy is that some cultural and ethnic groups are well-studied by researchers (often with the aid of governments), while other groups are neglected.

For example, there has been research on suicidal behavior in two aboriginal groups in Taiwan, the Atayal and the Ami (e.g., Cheng, 1995), but none on the Ainu in Japan. There has been research for over 120 years on suicidal behavior in Protestants versus Catholics, but none on suicidal behavior in Sunni Muslims versus Shi-ite Muslims (and other Islamic groups).[4] Often, societal prejudice plays a role in this. The Roma in Europe are a stigmatized group, often harassed by local and national governments, and there are only occasional observations about suicidal behavior in this group (Lester, 2015). [5]

There is also stigma associated with suicide which prevents study. For example, in the 1990s, the National Civil Rights Museum in Memphis (USA) noted in their first exhibit that slaves sometimes died by suicide, but no mention of this appears in 2020. The same may be true for discussion of suicide in the concentration camps in Germany and occupied territories during World War Two, where even survivors said that suicide was rare (for example, Primo Levi). In contrast, Lester (2005) found reports that, at one unit in Treblinka where 1,000 prisoners were housed, every morning at least one prisoner was found dead by hanging (a rate, therefore, of 36,500 per 100,000 per year).[6]

Lester (2014) has written about suicidal behavior in many oppressed groups, but this essay will focus on groups for which there is adequate research and data and draw attention to some of the issues in multicultural research.

Suicide in African Americans

In 2017, the suicide rates for males and females in the United States were: 28.2 and 7.0 for whites, 11.4 and 2.8 for African Americans, and 11.2 and 2.6 for Hispanics (Curtin & Hedegaard, 2019). This difference in the suicide rate between whites and African American has

[4] It might be argued that instability in the Middle East makes the study of suicide in Islamic groups difficult, but there are many immigrants from Muslim nations in Europe and North America.
[5] Despite the freedom of movement in the European Union, France deported over 18,000 Roma in France to Romania and Bulgaria in 2009-2012, an action criticized by the European Union government.
[6] All suicide rates in this essay are per 100,000 per year.

been stable and even existed in official government statistics in 1850 (Lester, 1998), and it became said in the African American community that "suicide is a white thing" (Early, 1991).

There have been hypotheses proposed for this difference. Based on Henry and Short's (1954) theory of suicide, suicide would be predicted to be less common in groups for whom there are external restraints on their behavior and for whom there are clear external forces to blame for their unhappiness and misery. Such groups would be more likely to direct the aggression stemming from their frustration outwardly and be more assaultive and homicidal and less likely to direct their aggression inward onto the self and become suicidal (Lester, 1988).

This difference in suicide rates, however, is also found in modern African nations which have been free of colonial rule for half a century. For example, Lester and Wilson (1988) found rates of suicide in Zimbabwe in the mid-1980s of 6.9 for African Zimbabweans, 9.7 for colored/Asians and 17.6 for Europeans. Henry and Short's theory does not seem to apply in Zimbabwe. The patterns of suicide in Zimbabwe also differed by ethnic group, with Africans using hanging more than whites (71% versus 14%) while whites used firearms more (34% versus 3%) and carbon monoxide more (26% versus 0%). Extending the research beyond Western countries, therefore, challenges our theories which are perhaps too narrow.

As noted above, Africans and whites in Zimbabwe used different methods for suicide. Lester (1994a) studied suicide among Chinese in three nations: Hong Kong, Singapore and Taiwan. In Hong Kong, hanging and jumping were the more popular methods for suicide, in Singapore jumping, and in Taiwan poisons. There were also differences in the suicide rates within the countries by ethnic group. For example, in Taiwan, the Hokkien ethnic group had a higher suicide rate than the Hakka ethnic group.

Researchers typically focus on the suicide rate when comparing cultural and ethnic groups but, as has been demonstrated above, groups differ in the methods used for suicide and also the ages at which suicide is most common and the circumstances of the suicidal act, such as the location chosen, the clothes worn, whether a suicide note is written, whether alcohol is ingested, and other circumstances of the suicidal act (Lester & Stack, 2015). For example, Gaylord and Lester (1994) found that elderly Chinese who plan to die by suicide by jumping in front of a train in the Hong Kong subway usually dress in traditional Chinese costume which stands out in style-conscious Hong Kong. Subway staff use this as one of the signs of a possible suicide and rush to intervene.[7]

Religion, Caste and Suicide in India

Arya, et al. (2019) calculated suicide rates in India for 2014-2015 by region, religion and caste. The suicide rate was highest in Christians (the majority of whom are Roman Catholic) at 17.6, next in Hindus (11.4), Muslims (7.0) and Sikhs (4.3). Arya, et al. had expected the lower caste groups to have higher suicide rates, but they found that these groups had lower suicide rates (8.6 and 9.4 versus 15.0 for the higher caste groups).

[7] Other signs include standing near the place where the train enters the subway station and putting parcels down as the train approaches rather than picking parcels up.

Arya, et al. noted, however, that these differences varied by region. In states where the percentage of lower caste people was low, their suicide rate was higher than the rates for higher castes. This is consistent with a study by Lester (1980) who looked at the suicide rates of whites and non-whites in the states of the United State in 1960. The correlation between the suicide rate of non-whites and the proportion on non-whites in each state was -0.41. States with a higher proportion of non-whites had a lower non-white suicide rate. This result supports the hypothesis proposed by Wechsler and Pugh (1967) that individuals whose social characteristics are relatively uncommon in a community would have a higher rate of psychiatric disturbance than those living in a community where their social characteristics are more common.

Subgroups in a society can be defined in many ways. In the study by Arya, et al., Indians were categorized by religion and by caste. Arya, et al. did not considered these two sets of categories in a two-way analysis of variance, which would have been of interest, nor did they examine the impact of other variables such as education, given the phenomenon of intersectionality discussed in the following section.

Marginal Groups and Intersectionality

Intersectionality, a concept first brought to prominence by Crenshaw (1991), may be defined as "the way in which different types of discrimination (=unfair treatment because of a person's sex, race, etc.) are linked to and affect each other."[8] As Opara, et al. (2020) have noted, researchers often view important contextual variables such as race, ethnicity, gender, sexual orientation, socioeconomic status/class and education level as separate sociocultural variables that rarely influence one another. In contrast, intersectionality theorists argue that contextual variables intersect and influence one another, resulting in unique outcomes (Crenshaw, 1991).

Cheref, et al. (2019) illustrated the complexities of contextual variables in a study of the 12-month incidence of suicidal ideation and attempts in six American racial/ethnic groups: white, Latino/a, Black, Asian or Pacific Islander, American Indian or Alaskan Native, and multiracial adults, using a national data set for 2008-2013 (the National Survey on Drug Use and Health). They found that the predictors of suicidality differed for the different ethnic groups. Depression in the previous 12-months predicted suicide attempts for all groups except Black and multiracial adults. Alcohol abuse and dependence predicted suicide attempts for Black, white and American Indian adults but not for the other ethnic groups. Although Cheref, et al. had data on sex, age, education and income, they did not divide their ethnic groups by these contextual variables, but merely included the variables in multiple regression analyses. There may have been differences in the predictors of suicidality for black women and black men, as well as young black men versus elderly black men. For example, in a study of university students divided into groups by race and sex, Lester and Walker (2017) found that religiosity was a predictor of suicidal ideation for European American men and European American women, but not for African American men and African American women. However, because of the nature of the sample (university students), Lester and Walker could not divide the sample further by age and education.

[8] www. https://dictionary.cambridge.org/us/dictionary/english/intersectionality

Gunn (2013) reviewed research on suicidal behavior in gay, lesbian and bisexual athletes. Athletes may be considered to be a subcultural group (although the nature of the subculture may differ by sport), and gay, lesbian and bisexual athletes are a part of this group for whom it has been very difficult to be open about their sexual orientation. In a review of research on this issue, however, Gunn found inconsistent evidence as to whether sport is more homophobic or less homophobic and whether gay, lesbian and bisexual athletes are more at risk for suicidal behavior or less at risk. Remember also that sport is not a homogeneous enterprise. There are athletes at high school and college and in professional teams. There are most likely differences for men and women at each of these levels and in each type of sport.

Cultural Scripts for Suicide

There are cultural scripts for suicide. Members of the Jain religion in India (a religion related to Buddhism) sometimes fast to death, and their deaths become a time for celebration and ritual in the Jain community (Laidlaw, 2005). In times past, elderly and sick Chukchi (in Siberia) choose to liberate their soul by having a family member kill them (Willerslev, 2009). Widows in India, still recently, engaged in sati in which they die on their husband's funeral pile. Weinberger-Thomas (1999) counted thirty cases in the state of Rajasthan between 1943-1987.[9] Monks and others in Tibet died by self-immolation to protest the treatment by the Chinese government of Tibetans, and self-immolation has been documented in many other countries (Laloë, 2013). Seppuku is a one-thousand-year-old Japanese ritual of suicide by cutting the stomach followed by beheading by an assistant. Participants have varied from defeated warriors, servants whose master had died, and wives in order to shame their husbands. It can be carried out as a solemn ritual or, as Yukio Mishima did in 1970[10], dramatic theater (Rankin, 2011).

Because scripts are associated with particular groups, counselors should become familiar with the cultural values and customs of the group to which their clients belong since these values and customs may shape the acceptability of suicide under certain conditions and the manner in which suicide is carried out.

Regional Subcultures

Some multicultural groups are evident from their appearance – for example, sex, age and race. Other groups are based on values and attitudes, and membership of these groups is not readily observable. Regional subcultures have been proposed and studied, and these are more diffuse groupings such that members of the hypothesized subculture may not be aware that they are part of a subculture defined by scholars. One such subculture in Europe in the north-south division. There is a perceived difference between the northern countries (Scandinavian countries and France and Germany) and the southern countries (Greece, Italy and Spain), as well as within countries. Southerners are seen as expressing their emotions outwardly more than do northerners. Pennebaker, et al. (1996) found that respondents in each of 26 countries rated southerners as

[9] Sen (2002) investigated one recent case (Roop Kanwar in 1987) and found that the widow was forced into this act. Because of her adultery, she could either engage in sati and become a heroine in the community or be murdered by her husband's family. Sen found that her husband's family herded her onto the funeral pile.

[10] Yukio Mishima engaged in seppuku in front of massed Japanese troops whom he was trying to goad into action to support the Emperor by means of a coup d'état.

more emotionally expressive than northerners. Lester (2004) found a trend for northerners in 20 countries to have higher suicide rates than southerners, but the trend was not statistically significant.

A regional subculture in the United States relevant to suicide is the *culture of honor*, also known as the *southern subculture*. This a subculture which links individual self-worth to social reputation and in which threats to one's self-esteem and honor are viewed as meriting a violent response. The honor culture also requires strict adherence to social norms. The culture of honor in the United States is assumed to be stronger in the southern and western states.

Crowder and Kemmelmeier (2017) found that, over the 50 American states, a southernness index was associated with higher suicide rates in European Americans but not in African Americans. The southerness index was also associated with gun ownership (which affects the method chosen for suicide), as well as the July climate, and economic deprivation. Age also played a role, with elderly (> 70 years of age) European American men showing the strongest association between southernness and suicide rates. Crowder and Kemmelmeier hypothesized that, as the white men age, they find it increasingly difficult to maintain their honor because of their loss of virility and the increasing likelihood of experiencing negative life events, lowering their sense of self-worth. Elderly white men may also become more socially isolated and feel that they are a burden to others.

Research on regional subcultures has focused almost entirely on the culture of honor, and exploration of other regional subcultures would be of great interest. For example, California has a reputation for being more progressive on many issues, such as environmental issues (such as control of car emissions), while states like Idaho and Montana are seen attractive to those who wish to isolate themselves from mainstream society. Suicide rates are higher in the Western states and in the mountain states. Perhaps those who migrate to these regions (or who are born there and who do not migrate elsewhere in the United States) have traits that increase their risk of suicide. Researchers have, hitherto, not measured regional subcultures other than southernness and their impact on suicidal behavior .In one exception to this, River (2014) explored the role of hegemonic masculinity on suicide in Australian men in which the view that men must be dominant in the society while others are subordinate affects their reasons for suicide, their choice of method, and their reactions to failing in their attempts to die.

Limitations in Multicultural Research

Multicultural Groups are not Homogenous

Dividing people into groups for study is often very crude. Consider the elderly. Many of these individuals live in clusters in communities that are restricted to the elderly. Others live in the community but socialize in specific locations, such as fast food restaurants for breakfast or at more organized locations such as Modern Maturity Centers. Still others live alone with few social relationships. Ethnic groups in a society also vary widely in their adaptation. Some marry only those of their own ethnicity, whereas others marry spouses of different ethnicities. Some integrate into the mainstream society in residence, occupation, recreation and hobbies, while others remain separated from other ethnic groups. Many Roma in Europe choose not to integrate

into mainstream society. In contrast, immigrants from Europe to the United States typically cherish their ancestry while, at the same time, integrating into the mainstream society, such as Irish Americans and Polish Americans.

Sometimes the community enforces rules on their members. The Amish, a Mennonite group that arrived in the United States from Germany, often live in segregated villages. Many of them dress alike and eschew modern devices such as electricity and cars. Others, however, break away from these rules and integrate into the mainstream society.[11] The same is true for those of Jewish ethnicity/religion and for many other groups. [12]

For suicidal behavior, the focus of the present essay, the pattern of suicidal behavior in members of a multicultural group may vary as the members of the group choose different paths. To group all those in one category together as if they are a homogenous group is to over-simplify the situation.

Research Data versus Theories

If motivated (and supported by governments), researchers can usually document suicidal behavior in subcultures. For example, despite the lack of research on the Roma in Europe, Walker (2008) was able to obtain data on suicide in a similar group in Ireland, Irish Travelers, and the results were published by the Wicklow County Council. Walker calculated a suicide rate of 37 for the Travelers: three times the Irish suicide rate. She found four patterns: (a) bereavement suicide after the death of a loved one, (2) violence-motivated suicide, (3) troubled suicides with a history of substance abuse and self-harm, and (4) shame suicides after committing criminal acts.

Theories concerning suicidal behavior specific to a particular multicultural group, however, are rare. Do theories of suicide apply to all multicultural groups, is one theory more relevant to a particular group than other theories, or does a new theory need to be developed to explain suicidal behavior in the group being studied? Joiner (2005) argued that his Interpersonal Theory of Suicide, with its constructs of thwarted belongingness, perceived burdensomeness and acquired capability for suicide, applies to all suicides. Some commentators have suggested that this is unlikely, and, in the present context, it may be asked whether the theory is relevant to all multicultural groups. The Interpersonal Theory of Suicide may apply to Native American groups in the past where the elderly felt that they were becoming a burden to their families, but not to Tibetan monks protesting against the treatment of Tibetans by the Chinese government. This are valid questions for all theories of suicide – to which groups does the theory apply and are new theories needed to explain suicide in this particular group?

Relevant to this is whether multicultural groups have developed their own theory of suicide. The Mohave, a small group of Native Americans situated on the banks of the Colorado River near Needles, California, saw the increasing frequency of suicidal behavior in their community as the result of growing individualism among the members of the group. The

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[11] In Delaware, my home state, some Amish have entered into the construction business, building homes and kitchen cabinets, while other maintain the dress code, drive horse and buggies, and follow other customs of the community.
[12] Some in these groups ostracize any who deviate from the rules, treating them as if they were dead.

Mohave were becoming more involved with their lovers and spouses and less involved with their kinfolk and with the tribe as a whole (Devereux, 1961). Lester (1997a) tested this hypothesis using a sample of 34 developed nations and found that nations whose residents had higher levels of individualism had higher suicide rates, thereby confirming the Mohave hypothesis. Do other multicultural groups have hypotheses about suicidal behavior in their group?

Suicide Prevention for Multicultural Groups

Setting up suicide prevention programs and counseling suicidal individuals raises several issues in a multicultural context In the following sections, two issues will be discussed: (i) do counselors have to match their clients in socio-demographic characteristics, and (ii) can belonging to a specific multicultural group be a risk factor for suicide,

Like Counseling Like

It has been argued that is difficult, if not impossible, for psychotherapists and counsellors from one multicultural group to help clients from a different multicultural group, while others argue that a competent therapist or counselor can help individuals from any multicultural group (Sue & Sue, 1990). It is wrong, however, to assume that all members of an ethnic group, for example, want to go to counsellors of their same ethnic identity. Sue and Sue (1990) presented the case of a Chinese American who resented being assigned to a Chinese American counsellor. The client felt that she was fully assimilated in the United States and wanted the best therapist regardless of ethnicity. Perhaps clients should be offered a choice of therapists if possible, including therapists who are members of their own multicultural group. This may be difficult in crisis intervention by telephone where the crisis counselor's voice may provide cues to his or her multicultural group and impact the efficacy of the crisis counseling. Crisis intervention and suicide prevention centers would benefit from having a group of available counselors of different multicultural identities.

The Cultural Group as a Stressor

Berlin (1986) describes cases in which the Native American culture was the stressor for Native Americans. For example, a bright young woman who completed undergraduate school and qualified as a teacher was admitted to graduate school. Her clan, however, told her that she was required to teach on the reservation. Her desire to go to graduate school was seen as striving to be better than her peers, and this was unacceptable and forbidden. The young women had a psychiatric breakdown and was hospitalized. In a similar situation, the tribe and another family could not decide whether to let a young woman go to graduate school for an MBA after she obtained her undergraduate degree and, during the long wait for a decision, she attempted suicide.

In this latter case, the young woman, whom Berlin called Josie, had parents with alcoholism, who frequently sent her and her brothers and sisters to live with relatives, while they went on drinking sprees. A teacher realized Josie's potential and received permission for Josie to live with her. With this teacher's help, her academic performance improved, and she went to college. Josie now resented that her parents who had neglected her were involved in decisions

about her life. The clan leadership and tribal council was relatively enlightened about the issues and eventually gave permission for Josie to attend graduate school. While at graduate school, Josie underwent psychotherapy to deal with her depression and anger and other personal problems. After graduation, she returned to the tribe to manage their business office, marrying a young man who had fought a similar battle in order to obtain an MSW degree.

These examples illustrate the importance of the counsellor having awareness of the cultural background of the client and allowing enough time for the client to provide information about the ways in which their cultural group provides stressors as well as resources.

Lessons from Programs for Native Americans[13]

Ethnic minorities in general may not utilize mental health services as much as whites. The reasons for this include language problems, the stigma attached in the culture to needing such services, limited access, and low awareness of the services which are available. Added to this, minorities may distrust white mental health professionals and, indeed, may have been treated insensitively, and even humiliated, in their previous contacts with whites. For Native Americans, they may feel uncomfortable talking about feelings to non-group members.

May and Dizmang (1974) argued against the imposition of Western values by agencies. Native American need to be given an active role in deciding what to do and in influencing their fate. Native American must be involved in policy making concerning education, community action, and mental health programs. Furthermore, Native American who have assimilated into the larger culture may not understand the less assimilated Native American and, in addition, tribal rivalries must be considered. People from one tribe may not be able to work effectively with people from another tribe. For Native Americans living on reservations, there may be limited resources for transportation to mental health centers and for communication (such as telephones that allow for privacy.

Primary prevention involves the prevention of the development of suicidal tendencies in individuals. Native American communities have preferred these programs because they are non-stigmatizing and because they emphasize collective activity by the community. Their benefits, however, are long-term and are not cost-effective for *suicide prevention*, although they may improve the mental health of the community in general.

Proposals for the primary prevention of suicide among Native American have included the restoration of the traditional culture since these rituals and ceremonies forge a sense of community and reduce the feelings of powerlessness. In addition, it has been documented that many Native American youths (and aboriginal youths in other countries) die by suicide in jail after committing minor offenses, especially when drunk. Diversion programs would be helpful in these cases. If the offenses are more serious, tribal elders can be recruited to stay with the youths in the jail cell. The recruitment of gatekeepers in the community would help identify those who have behavioral and psychiatric problems and get them to facilities that could help them.

[13] This section is based on Lester (1997b).

Secondary prevention is early intervention with persons who are on the verge of suicide. Several strategies have been developed for this. For suicide prevent centers, Blanchard, et al. (1976) suggested the following guidelines for reservations: (1) that each village maintain a 24-hour crisis center, (2) that motivated Native Americans run the centers trained for both telephone and face-to-face crisis counseling, (3) that the centers maintain a list of suicidal individuals in their village and that special community workers be assigned to work with these individuals, (4) that people be trained in emergency medical care and provided with an ambulance so that potential suicides can be saved, (5) that the tribal police be trained in suicide prevention, (6) that the Public Health Service provide 24-hour medical, psychiatric and psychological consulting and services, (7) that the Bureau of Indian Affairs become involved with these efforts, (8) that emergency telephones be placed at strategic places throughout the reservations, (9) that the schools get involved with these efforts, and (10) that tribal leaders be encouraged to get involved in these efforts. Facilities for short-term residential crisis treatment would also be useful.

Psychotherapy places a high value on vocabulary, self-disclosure, introspection and a desire for and active involvement in change of the self. These traits are not common among Native American who, therefore, appear to be passive and "resistant" to Western counselors. In addition, the theory of mental illness for Native Americans may differ from Western views. For example, some Native American tribes believe that mental illness can arise from spirit possession and from transgressions. Clients who believe this may benefit more from a healer from their culture than from a Western-oriented counselor. Therefore, Western systems of counseling traditional should be integrated with Native American healing ceremonies, such as medicine ceremonies, sweat lodges and talking circles. A "team" approach, combining Western-oriented and Native American healers together, may help clients more than either acting alone.

One additional problem is that the values on reservations are not homogeneous. While the oldest members may believe that traditional ways are the best, young adults may have become invested in contemporary mainstream culture. Furthermore, the traditional customs and values may be in flux.

A cautionary note: Levy (1988) studied suicidal behavior among the Shoshoni-Bannock and found that none of the completed suicides had made prior suicide attempts and that the suicides were found in only eight of the families on the reservation. The majority of the suicides, going back into the 19th Century, came from only four families. These families had been labeled as deviants and had become scapegoats for the community. Just as one particular family member may be the symptom bearer for a whole family, so in this community these families seemed to bear the symptoms for the community. Thus, an effective suicide prevention program would not be one which focused on the community as a whole or on high risk youths, but rather one which focused on getting to know these few families intimately and working with them to change their status. To focus efforts on these families might serve, however, to reinforce their "labelled" status as deviants.

These examples from suicide prevention programs for Native Americans provide lessons for those working with other multicultural. For example, the difficulties encountered in counseling clients from other multicultural groups are illustrated by the Suicide Prevention and Crisis Intervention Center in Buffalo (New York) in 1970. The telephone counselors at the center

took calls from four separate telephone services advertised in the community separately: suicide prevention, problems in living, drug hotline and teen hotline. It was found that the same counselors, all of whom were over the age of 21, could not handle calls from the teen hotline. The counselors had to counsel adults who were severely depressed and who sometimes had already taken an overdose. To then switch to a call from a teenager who had broken up with boyfriend or girl friend made it hard for the counselors to take the problem seriously. The teen hotline was switched to a separate organization, staffed by teenagers and college students, trained by the center's staff.

Some Recent Programs

Middlebrook, et al. (2001) reviewed the relatively few suicide prevention programs for Native Americans that have been reported. They noted that it was important to identify specific risk and protective factors for this group which may differ from the factors identified for the general American population. Programs also need to specify the group targeted, for example, youths. Of the nine programs identified, seven programs focused on children and teenagers, and five of these used school-based curricula.

A program for the Salish and Kootenal tribes in Montana established culturally relevant treatment, including residential facilities and outpatient clinics using caregivers from the community (Fleming, 1994). For the Papago in rural Arizona, Kahn, et al. (1988) described a program involving a traveling clinic to provide consultations for schools, hospitals, the police, and tribal courts. More recently, Le and Gobert (2015) described a primary prevention program for school children based on mindfulness, while Dillard, et al. (2017) described the clients attending a health service clinic in Alaska.

The state of suicide prevention among Native Americans, however, is still in a preliminary stage so that, recently, a task force met to identify challenges for suicide prevention for these groups and to propose directions for future research and prevention (Wexler, et al. 2015).

This brief discussion of suicide prevention for Native Americans may have some application to aboriginal groups in other countries, but not to other multicultural groups. Each self-defined multicultural group needs to explore what effective suicide prevention should entail for their group and how they might tailor the tactics for the members of their particular group.

Discussion

This essay has endeavored to illustrate the importance for suicide risk assessment and for preventing suicide of taking the multicultural characteristics of the individual into account. Many current discussions of multicultural issues focus on those of ethnicity, sex and gender, but there are other characteristics that lead to sub-groups of the population, such as education, age, type of employment, etc. We must also be careful not to treat all women, all elderly or all transgender individuals as identical. Within any group, there may be much diversity. As noted in the previous section, Native Americans are far from being one homogenous group.

It is easier to develop suicide prevention programs when the group is, not only somewhat homogeneous, but also located geographically in one place. There have been many programs developed for Native Americans who reside on reservations, but few for Native Americans who have moved away from the reservations and entered mainstream American life. Many multicultural groups are dispersed across the United States, and it is not easy to provide resources for dispersed groups.

Modern technology may facilitate the developed of crisis intervention services because each multicultural group may form groups and forums using Internet applications. However, many individuals at risk for suicide tend to be socially isolated and lonely, and they may not be active in social media or, if they are active, they may feel estranged from their peers.

Finally, it is relatively easy to provide telephone crisis intervention services and targeted ads for specific groups. It is much less easy to provide access to in-patient and out-patient facilities for specific groups and to provide access to counselors and clinics for these groups staffed by individuals from their own group. Many of the groups have not produced enough professional counselors, policy makers, educators and lawyers to argue for their rights and provide services, for example, the Roma in Europe and the Travellers in Ireland.

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Suicide Studies, 2021, 2(2)

GEORGE KELLY'S PERSONAL CONSTRUCT THEORY AND THE THOUGHT PROCESSES OF SUICIDAL INDIVIDUALS

David Lester

George Kelly (1955) proposed a theory of the structure of the mind based upon cognitive processes (thinking). His basic idea was that we attempt to interpret and make sense of the events that we experience. Our psychological processes and our behaviors are determined by the way in which we anticipate events (or in Kelly's terms, how we construe events). At the highest level of abstraction, we may be seen as having a theory of the world (a *construction system*). Usually, we seek to extend and refine our construction system. We try to develop a construction system that applies to more and more of the experiences that we encounter, and we try to make it more accurate in the predictions to which it leads us.

Clearly, the theory is a growth-oriented theory in which we become more skilled in making sense of the world in which we live. For Kelly, the model for human behavior is the theoretical scientist who proposes a theory of some phenomenon and then tries to modify the theory to account for all the new data that empirical scientists accumulate about the phenomenon.

As we continue to exist, therefore, we experience more and more, and so our construction system changes and becomes a more accurate predictor for future events. However, it is possible to have inconsistencies and incompatibilities in our construction system. The view of the world we have when we are depressed is often quite different from that which we have when we are happy. When we use only one part of our construction to interpret today's events, we are said to have *suspended* the remaining inconsistent parts.

The Basic Concepts

Construction systems are composed of *constructs*, concepts which we apply to events when we experience them. Constructs are bipolar and dichotomous. When we construe an event, we decided that it is *either* this *o*r that. Each of us has idiosyncratic constructs. For example, at graduate school, I had a professor who classified people on the basis of their ability as either intelligent or handicapped. Kelly stressed that it was important to find out how both ends of the construct were labelled by the person since they may not use the same label as we would. I might use stupid as the opposite of intelligent, but my professor used handicapped.

The poles of the construct may be used frequently and consciously, in which case the pole is said to be *emergent;* it may be *implicit,* rarely used and not obvious to the person: or it may be *submerged,* never used and unconscious.

Types of Constructs

Kelly was not concerned with identifying particular constructs that are commonly used.

Rather he defined various properties of constructs. Constructs have a *range of convenience*, a set of events or objects to which they are typically applied. Constructs may be *preverbal* because we developed them before we had good language skills to symbolize them. Constructs may be *propositional*, that is, classification of an event with one construct does not imply anything about how it will be classified in other constructs, or the opposite, *constellatory*. Constellatory thinking is illustrated by sexist and racist ideas. If you meet a man about whom you know nothing and say, 'This is a man; therefore, he is rational, insensitive, cold, brutal and oppresses women', you are construing in a constellatory manner.

Constructs may be applicable to your conception of your innermost self, in which case they are called *core* constructs; or only tangentially relevant to your sense of self, in which case they are called *peripheral* constructs. In general, psychotherapy deals with your core constructs while education deals with your peripheral constructs.

Construction Systems

Construction systems, or parts of them, may be *tight* or *loose*. In tight construing, your theory of the world makes clear unambiguous predictions about what will happen. In loose construing, your theory does not make clear predictions. Daydreams employ tight thinking in general, while dreams employ loose thinking. Creative thinking is frequently loose but, in order to communicate creative ideas to others, tightening of the ideas must occur. (Einstein's early musing on his innovative ideas in physics might well have passed through a loose period, but to publish the ideas for others to read and use required tightening of them.)

The Perceptual Field

The *perceptual field* is what we experience. It is our subjective perception of the external world. If we explore this external world and seek to gain new experiences, we are said to be *dilating*. On the other hand, if we withdraw from new experiences and retreat into a more well-known world, we are said to be *constricting*.

Reconceptualization of Familiar Concepts

In addition to defining a new set of concepts, Kelly also considered that the traditional meaning of some familiar terms could be improved, in particular by looking at their implications from the person's point of view and from a personal construct perspective.

Threat

Threat is when you anticipate that you are about to experience some events that will necessitate a substantial change in your core constructs. This will involve a reconceptualization of who you really are and will involve developing a new set of constructs. We commonly call this an identity crisis.

Fear is what you experience when you anticipate that there will be a change in your peripheral constructs, clearly not as major a process as threat.

Anxiety

Anxiety is an awareness that your construction system does not make adequate predictions for the events which you are experiencing. You cannot construe these events. There are various reasons for this. For example, it may be that you have never experienced these types of events before, and your construction system does not apply to them. Or that the experiences are occurring too fast for you to assimilate them. Or that the experiences may have inherent contradictions and inconsistencies so that they cannot be assimilated.

Aggression

Aggression involves the active elaboration of your perceptual field. You go out and seek experiences, often in those areas which cause you anxiety (and which, therefore, you cannot construe accurately). The opposite to aggression is *passivity*.

Hostility

When you are confronted with evidence that shows that your construction system is incorrect or inadequate in its predictions, you can seek to modify your construction system so that it becomes more adequate. If instead, you seek to distort the evidence so that it remains consistent with your old construction system, you are said to be *hostile*.

The use of psychoanalytic defense mechanism (which involve the distortion of evidence) is a hostile act. Hostility may also involve extorting evidence from the environment that is consistent with your old construction system. Most of the strategies described by Leon Festinger (1957) in his theory of cognitive dissonance are hostile. The smoker who, for example, does not notice the warning on the package saying that smoking is hazardous to his health or who refuses to believe that smoking causes lung cancer is behaving in a hostile fashion.

Kelly on Suicide

Kelly (1961) was asked to write specifically on the determinants of suicide. He first stressed that suicide, like most of the other behaviors of a person, was an attempt to validate one's life. It will be consistent with the person's construct system and serve to reinforce the particular theory that the person has adopted.

Secondly, he noted that suicide will occur when the outcome of events is so obvious (and we might add anticipated to be extremely unpleasant) that there is no point in waiting around for them. Kelly noted the similarity of this idea to fatalism. If the future is anticipated to be unpleasant and painful, then the person will experience hopelessness. Neimeyer (1984) has speculated that suicidal acts committed in this state will be deliberate, well planned and lethal.

Suicide will also occur when everything seems so unpredictable that the only definite action is to leave the scene completely. This will be a condition of extreme anxiety. Neimeyer suggested that suicidal actions committed in this state will be impulsive, poorly planned and less lethal.

Kelly noted that suicide, like depression, was an act of extreme constriction. In constriction, the person shrinks his world to a manageable size. While the depressed person constricts his world by withdrawing from some activity, suicide involves an extreme degree of constriction.

Suicide as a Hostile Act

Lester (1968) suggested that some forms of suicide may be seen as hostile acts. Often suicide, especially attempts at suicide, are ways of extorting evidence from the world to conform to some particular viewpoint that the suicidal person has.

If a lover is leaving, the attempt at suicide may be motivated by a desire to extort confirmation that the departing lover really does love you and will not leave after all. Alternatively, but more rarely and less obviously, the attempt may be a way of extorting rejection from others to confirm a belief on the part of the suicidal person that people cannot be trusted, and that the world is a rejecting place.

In his research, Lester (1969) found that attempted suicides expressed more resentment than nonsuicidal people. The resentment was shown to be directed toward those upon whom the suicidal person was dependent. The suicidal person resented the world and felt that he had been treated unjustly. Lester argued that his suicidal attempts may have been planned to give others a chance to reject him, thereby validating his resentment against the world. By his suicidal actions, he risks being rejected by those who are important to him. (The suicidal person often makes it more difficult for his parents, his peers, and his wife or girl-friend to love him and accept him.)

The suicide attempt may also serve to validate other beliefs. The suicidal person often experiences feelings of worthlessness and depression. By risking rejection through his suicidal behavior, he can seek a validation of his worthlessness and a demonstration that he is not worth caring about.

Lester's ideas differed from the more traditional view of the suicidal person, which sees the aim of the suicide attempt to lie in the extortion of love and attention from others, though this is still hostile behavior in Kelly's theory. These two differing views suggest the possibility of conflict in the suicidal individual, a conflict between the seeking of love and the seeking of rejection. We might speculate that this conflict is a feature which differentiates individuals who attempt suicide from those who successfully kill themselves. The successful suicide may not be seeking rejection, but rather love and attention. Although he will not be able to receive this love and attention, the suicidal person often acts as if he will be around to savor it. Shneidman and Farberow (1957) have called this kind of thinking *catalogic*.

Leenaars' Description of Kelly's Views

Leenaars (1988) has endeavored to specify the views of Kelly on suicide so that he could examine the content of suicide notes to explore whether such notes illustrated Kelly's views. Leenaars found ten basic ideas:

1. Suicide is an attempt to make sense out of whatever has happened to the person.

2. The person is killing himself because his worst expectations are coming true.
3. The suicidal person's expectations/anticipations about himself, others and the world are not coming true.
4. The suicidal person is expecting less and less for himself, others and the world.
5. The suicidal person feels helpless in understanding an unpredictable and senseless world.
6. The suicidal person is aware of events that don't make adequate sense to him.
7. The suicidal person needs to change himself in order to handle forthcoming events in a way that seems to be impossible to him.
8. The suicidal person has been trying or is trying to make people or events fit with what he expects is the right thing.
9. The suicidal person does not seem to fit into or be able to do what other people expect of him.
10. The suicidal person is killing himself because he sees no alternative to this action and he sees the suicide as giving him some meaning in his life.

Leenaars found that none of these themes differentiated genuine from simulated suicide notes and, furthermore, none of them occurred in at least two-thirds of the genuine suicide notes.

Empirical Evidence for Kelly's Ideas

What evidence is there for the validity of Kelly's ideas about suicide? Very little research on suicide has been conducted within the framework of Kelly's theory. Furthermore, since his theory focuses on cognitive processes and since very little general research has been carried on the cognitive processes of suicidal people, there is not much empirical evidence available that is pertinent to Kelly's ideas. However, some research has relevance for the theory.

General Research on Thinking in Suicidal People

Neuringer has carried out a series of studies to investigate the thought processes of the suicidal individual. In his first study (Neuringer, 1961), he investigated whether suicidal people have a tendency to think in terms of absolute value dichotomies. This tendency would result in the individual polarizing his evaluations into extreme values, such as good versus bad or right versus wrong.

To investigate dichotomous thinking, Neuringer used the Semantic Differential in which the subject has to rate different concepts (such as democracy, love, life, etc.) on different scales (such as good-bad, clean-dirty, happy-sad, etc.). Each concept can be judged on a scale with three degrees of agreement (for example, very bad, moderately bad, and mildly bad). Twelve concepts were organized into pairs (life-death, honor-shame, etc.) and the difference in the ratings of these paired concepts over the scales of judgment was used to measure the tendency to evaluate dichotomously. Neuringer compared male suicide attempters, psychosomatic patients and normal people. Neuringer found that both the suicidal and psychosomatic patients made significantly more extreme judgments than normal people. The suicidal individuals did not differ from the psychosomatic patients, and so dichotomous thinking appeared to be characteristic of all disturbed patients and not unique to suicidal individuals.

In a re-analysis of the data from this study including more of the rating scales, Neuringer

(1967) found that the suicidal individuals did show more dichotomous thinking than the psychosomatic patients.

Neuringer (1964) investigated rigid thinking in these same patients, using an attitude scale and a problem-solving task. On both tests, the suicidal patients behaved significantly more rigidly than the psychosomatic patients and the normal people. Patsiokas, et al. (1979) also found suicidal people to be more rigid as compared to nonsuicidal psychiatric patients.

Later Neuringer (1979a, 1979b; Neuringer and Lettieri, 1971) found that suicidal people rated the concepts of life and death more extremely than comparison patients and that suicidal people with a higher risk of suicide rated the concepts most extremely than suicidal individuals with a lower degree of risk.

Kelly's notion of the basic cognitive elements in the mind is that they are bipolar concepts. Whether this is indeed true or not, the research of Neuringer shows that suicidal people certainly do seem to construe concepts relevant to living and dying more dichotomously than nonsuicidal individuals. In line with this finding, Osgood and Walker (1959) found that genuine suicide notes contained more 'allness' terms (such as always and never) than simulated suicide notes.

Secondly, one of the prerequisites of hostility is that the individual must be reluctant to change and modify their construction system. This is not the same as simple measures of rigidity as measured by standard psychological tests. However, the research showing that suicidal people are more rigid than nonsuicidal people is consistent with the conceptualization of suicidal people as hostile.

Constriction

Neimeyer (1984) reviews research relative to Kelly's notion that the suicidal person constricts as a general strategy. Landfield (1976) tried to measure constriction using the REP test by noting whether the individual was unable to classify a significant other using the constructs identified on the REP test and whether the individual used concrete constructs. He found that suicide attempters did indeed appear to be more constricted on these measures. Neimeyer also felt that research showing that genuine suicide notes contained more concern with minor details, trivia and neutral statements than simulated notes (Shneidman and Farberow, 1957) as showing constriction.

However, both of these studies focus on the construction system of the suicidal individual. Constriction refers rather to the perceptual field. A constricted individual restricts the inflow of information into his mind. Thus, the studies reviewed by Neimeyer do not really explore constriction.

There are no studies specifically designed to explore Kelly's notion of constriction of the perceptual field. But some research is pertinent to the issue. For example, the unequivocal research showing that suicide is most closely associated with the psychiatric syndrome of depression (for example, see Temoche, et al. [1964]) supports the notion of suicide as an act of a

constricting individual since depression (with symptoms of motor retardation, apathy and loss of interest in the world) is a constricting behavior.

Several researchers have found that suicidal people are more present-oriented and have less future time perspective (Greaves, 1971; Neuringer, et al., 1971; Yufit and Benzies, 1973). This would be consistent with constriction, since the suicidal people would be restricting thoughts of the future from intrusion into their consciousness.

Several studies have also reported that suicides are more socially isolated than nonsuicidal people. For example, Bock and Webber (1972) found that the suicide rate in the elderly was higher if they were unmarried, had few relatives around and belonged to few organizations. Humphrey, et al. (1971) found that suicide attempters were less likely to be married and more residentially mobile. They had weaker family ties and fewer interactions with relatives. They argued with friends (though interacting with them more) and preferred to be alone. Nelson, et al. (1977) also found that attempted suicides were less socially involved than nonsuicidal psychiatric patients.

However, not all research supports this social withdrawal. Finlay (1970) and Greth (1973) found suicidal and nonsuicidal college students to have similar levels of involvement in organizations and college activities, though playing team sports less often.

This social withdrawal may be a result of the depression and suicidal involvement and it may be a contributing cause (a 'vicious' cycle). In Kelly's theory, the constriction is part of the suicidal life-style, especially in the period prior to the suicidal action.

System Disorganization and Anxiety

Kelly hypothesized, as we have seen, that suicide may be a response to the anxiety associated with the collapse of the personal construct system. Landfield (1976) sought to explore system disorganization in suicidal people by examining how many clusters of constructs they used in responding to the REP test. Landfield found, as predicted, that suicide attempters had more disorganized construction systems than comparison patients.[14]

Fatalistic Depression

The presence of fatalistic depression in suicides is best documented by the research of Aaron Beck and his associates on hopelessness in suicidal patients. Beck, et al. (1975, 1979) found that a measure of hopelessness, a cognitive component of the depression syndrome, was more strongly correlated with suicidal intent in suicide attempters and with the degree of suicidal ideation in suicidal ideators. Lester, et al. (1979) found that hopelessness scores increased from those making gestures to those making serious attempts and that those subsequently completing suicide were among the most hopeless at the time of their initial suicide attempt.

Not every investigator finds that hopelessness is a stronger predictor of suicidal intent

[14] Lester (1971) sought to examine this hypothesis, but he used the RES test which is not a suitable technique for testing the hypothesis.

than general depression (for example, Pokorny, et al., 1975), but all agree that hopelessness predicts suicidal intent.

Impulsive Construing

In construing, Kelly noted that typically people construe propositionally for a while before preempting and deciding how the situation may best be understood. The impulsive person has a very brief propositional phase while the obsessive person has too long a propositional phase.

It has commonly been noted that suicidal people are often impulsive. Corder, et al. (1974), for example, reported that adolescent suicidal attempters were more impulsive and had a higher activity level than controls. More recent research has compared impulsive and nonimpulsive attempters. Williams, et al. (1977) found, for example, that impulsive attempters were more likely to have a history of suicide attempts and had the means for attempting suicide more readily available.

Using Megargee's (1966) concepts of overcontrol and undercontrol, Lester and Wright (1973) speculated that suicide attempters may be undercontrolled (impulsive in Kelly's terminology), while completed suicides may be overcontrolled (constricted emotionally in Kelly's terminology).

Negative Self-Construing

Neimeyer (1984) notes that negative self-construing may also be an important accompaniment of suicidal preoccupation. All research confirms this (Neuringer, 1974; Wentz, 1976; Wetzel, 1976). Kaplan and Pokorny (1976) found that low self-esteem also predicted *subsequent* suicidal thoughts, threats and attempts in seventh-grade children.

Neimeyer (1984) summarized the interaction of self-esteem and depression in suicidal people in this way. At mild levels of depression, the self-schema begins to lose some of its organization as it begins to assimilate negative as well as positive information about the self. This continues until, at moderate levels of depression, inconsistent self-construing dominates the system. As the depression deepens, a stable and consistent negative self-schema emerges. The degree of negative self-construing appears to vary with the intensity of symptoms, while other traits such as polarized construing may be stable personality traits of the suicidal person.

Discussion

It can be seen that several lines of research support ideas about suicide that can be derived from Kelly's theory of personal constructs. Constriction of the perceptual field, disorganization of the construction system, anticipatory failure of the predictive system, impulsive construing, negative self-construing, polarized construing and hostility all may characterize the suicidal individual. In addition, several case studies of suicidal people have appeared with a personal construct theory perspective (Ryle, 1967). Thus, the personal construct perspective may prove to be a stimulant for innovative research into suicide.

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Suicide Studies, 2021, 2(2)

PTSD AND SUICIDE

David Lester

Abstract: In a sample of 4,700 members of an online group, self-report of PTSD and suicidality were associated, even after controls for self-reported depression.

Krysinska and Lester (2010) have reported a meta-analysis indicating that posttraumatic stress disorder (PTSD) is linked to suicidal behavior. However, this linkage may be mediated by comorbid psychiatric disorders such as depression (Cougle, Resnick & Kilpatrick, 2009). To explore this possibility, data were obtained from a website[15] (Larratt & Fowler, 2003) which had a smaller community[16] where people interested in body modification could create personal pages. All members of the website were sent an online survey in July 2003, with an incentive for those who responded of one-month free access to the smaller community. There were 4,700 usable responses (with some missing data); 2,078 men and 2,581 women, and 31 others. The modal and median age was 20-21 yrs., and 88% were white.

Respondents answered yes/no to the question of whether they have PTSD (3.6% said yes) and depression (43.6% said yes). Respondents were asked how many times they had attempted suicide and given the options: never, never but I have contemplated it, once, more than once and a lot: 38.6% had contemplated suicide and 27.3% had attempted suicide.

PTSD and suicidal behavior were strongly associated in a crosstab analysis using SPSS ($X^2 = 79.64$, $df = 2$, $p < .001$). For the nonsuicidal respondents, 1.1% reported PTSD; for those who had contemplated suicide 3.2% reported PTSD; and for those who had attempted suicide, 7.8% reported PTSD. This association was significant for the 2051 depressed respondents and for the 2649 nondepressed respondents ($X^2 = 16.74$ and 19.57, respectively, $df = 2$, $p < .001$). The association was similar and significant for men and women separately and for depressed and for non-depressed women, and similar but nonsignificant for depressed and for non-depressed men.

These results indicate that self-report of PTSD and suicidality are associated in this sample, even after controls for self-reported depression.

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SUTCIDE IN THE UNITED STATES: AN INTERNATIONAL PERSPECTIVE[17]

David Lester

Abstract: Recent epidemiological trends in American suicide rates were compared with world-wide trends and found to be quite divergent. In addition, the time-series American suicide rate was not predictable using measures of family social integration. Current theories of the etiology of suicide were used to derive a linear regression equation to predict suicide rates, but this equation over-estimated the American suicide rate.

Understanding the patterns and trends in a nation's suicide rate can be greatly enhanced by comparing these patterns and trends with those in other nations.

The Epidemiology of Suicide in the United States and the World

The United States has shown epidemiological trends in suicide rates in recent years somewhat similar to those in other nations. From 1970 to 1984, the United States experienced an increase in the suicide rate of men, as did 21 of 23 nations studied by Lester (1990) (see Table 1), whereas the American female suicide rate decreased during this period, similar to only nine of the 23 nations. Overall, the male/female suicide rate ratio increased in the United States and in 15 other nations during this period.

There has been concern recently over rising elderly suicide rates. From1970 to 1980, Lester (1993) found rising elderly suicide rates for men in 17 of 28 nations studied and in 15 of the nations for women (see Table 2). In the United States, the suicide rate for those 65 years of age and older increased by 4.1% for men and decreased by 19.4% for women. Thus, trends in male elderly suicide rates in the United States were similar to those of most nations in the world, though less pronounced.

The 1970s witnessed rising suicide rates among youth. From 1970 to 1980, Lester (1988) found that 23 of 29 nations studied experienced a rise in youth suicide rates (see Table 3). In line with this, the suicide rate of Americans aged 15-24 rose 39.8% as compared to an increase in the total American suicide rate of only 2.6%.

These studies examined changes in suicide rates in the 1970s. What has happened in the 1980s? As can be seen in Table 4, more recently, in the 1980s, the American male youth suicide rate has increased only slightly whereas the American male elderly suicide rate has increased markedly. American female suicide rates in general have remained steady. The rest of the world, however, has no shown no consistent trends during the 1980s.

[17] This essay was written in the 1990s.

In most nations of the world, suicide rates increase with age for men. Using a simple rank correlation coefficient between the suicide rate of each group and the ages of the age groups, the correlations for men were positive in 33 of 36 nations in 1980 (see Table 5). The pattern in the United States was consistent with this pattern. For women, the increase in suicide rates with age was less consistent, and the United States showed no linear trend with age.

There have been changes in the methods used for suicide over the years. Looking at the changes from 1960 to 1980, the United States experienced a slight decrease in the use of solids and a large increase in the use of firearms (see Tables 6 and 7). These changes were much less extensive than in the nations of the world as a whole, where the use of exhaust gas, hanging, jumping and other methods increased significantly in addition to the use of firearms.

Using multiple regression analyses, Lester (1994b) found that suicide rates in the United States from 1950 to 1985 were associated with higher divorce rates and lower birth and marriage rates, consistent with predictions from Durkheim's (1897) classic theory of suicide. The trends in other nations were similar for divorce and marriage rates (see Table 8), but inconsistent for birth rates.

Overall, the trends in suicide rates in the United States in the 1970s and 1980s were consistent with trends in other nations. However, the trends in nations of the world during these two time periods were clearer for male suicide rates than for female suicide rates. For women, there was a much greater variation between nations in whether suicide became more or less common over the last two decades.

Explanations of Differing National Suicide Rates

Physiological Theories

One possible explanation, of course, for differences in the suicide rates of nations could be that different nationalities differ in some relevant manner in their physiology. Perhaps, for example, there are differences in inherited psychiatric disorders, particularly affective disorders, or brain concentrations of serotonin, the neurotransmitter believed to be responsible for depression?

Lester (1987) studied the associations between the proportions of people in 17 industrialized nations with the different types of blood (O, A, B and AB) and the nations' suicide rates. He found that, the lower the proportion of Type O people and the higher the proportion of Type AB people, the higher the suicide rate.

Mawson and Jacobs (1978) noted that the synthesis of the neurotransmitter serotonin (believed to contribute to people's level of depression) by the body requires the precursor amino acid L-tryptophan. Corn has less L-tryptophan as compared to other cereals, and so nations with a higher corn consumption would get less L-tryptophan, and so might have lower levels of serotonin. Lester (1985), however, in a study of 38 nations, found no association between per capita consumption of corn and suicide rates.

Kitahara (1986a, 1986b) estimated the levels of tryptophan in the blood relative to other amino acids (such as tyrosine) from dietary intake in residents of nations. He found no associations in a large sample of nations (a result replicated by Lester [1989]).

Psychological Theories

The major psychological factors found to be associated with and predictive of suicidal behavior are depression (in particular hopelessness) and psychological disturbance, labeled variously as neuroticism, anxiety, or emotional instability (Lester, 1992a) . Psychiatric disorder of any kind appears to increase the risk of suicide, with affective disorders and substance abuse leading the list.

Alcohol abuse and drug abuse are strongly linked with suicidal behavior. Not only are these behaviors seen as self-destructive in themselves (Henninger [1938] called them chronic suicide), but both attempted and completed suicide occur at high rates in substance abusers (Lester, 1992b)

Composition Theories

Moksony (1990) has noted that one simple explanation of differences in suicide rates between nations is that the national populations differ in the proportion of those at risk for suicide. For example, typically in developed nations, suicide rates are highest in the elderly. Therefore, nations with a higher proportion of the elderly will have a higher suicide rate.

Social Theories

The most popular explanations of social suicide rates focus on social variables. These social variables may be viewed in two ways: (1) as direct causal agents of the suicidal behavior, or (2) as indices of broader, more abstract, social characteristics which differ between nations.

The most important theory for choosing relevant variables is that of Durkheim (1897). Durkheim hypothesized that suicide rates were caused by the society's level of social integration (that is, the degree to which the people are bound together in social networks) and the level of social regulation (that is, the degree to which people's desires and emotions are regulated by societal norms and customs). Durkheim thought that this association was curvilinear, but later sociologists have suggested that the association is linear in modern societies (Johnson, 1965) , with suicide increasing as social integration and regulation decrease.

Studies of samples of nations have found that suicide rates are associated with such variables as the birth rate, female participation in the labor force, immigration, and the divorce rate (Stack, 1980, 1981a, 1981b). Some investigators see these associations as suggesting a direct link between divorce or immigration and suicidal behavior. For example, divorce may be associated with suicide at the aggregate level because divorced people have a higher suicide rate than those with other marital statuses.

Other investigators see the associations as suggesting that divorce and immigration are measures of a broader and more basic social characteristic, perhaps social integration, which plays a causal role in suicide. In this latter case, nations with a higher rate of divorce may have a higher rate of suicide for those in all marital statuses.

In a study of 25 nations in 1970, Lester (1994a) found that suicide rates were associated positively with the percentage of the elderly, the divorce rate and the gross domestic product, and negatively with the percentage of people under the age of 15, the unemployment rate and the birth rate. The association of suicide with birth and divorce rates is consistent with predictions from Durkheim's theory, the association with the percentage of elderly and young is consistent with a composition explanation of the suicide rate, and the association with unemployment and gross domestic product is consistent with previous research findings (Platt, 1984; Stack, 1981b)

Predicting the United States Suicide Rate

This brief review of physiological, psychological, sociological and compositional theories of suicide rates has identified a number of variables which ought theoretically to be associated with suicide rates or which have been found empirically to correlate with suicide rates. As a test of the utility of these variables, a set of these variables was tested for their ability to predict the suicide rates of a sample of developed nations with available data. Then, the regression equation so identified was examined for its ability to predict the American suicide rate.

The variables chosen, together with their theoretical source, were: blood type (physiological), alcohol consumption (psychological), percentage of the elderly (compositional), and divorce and birth rates (sociological).

The sample used consisted of 18 industrialized nations first used by Lynn (1982) in a study of national character. Data on blood types were available for 17 of these, and the present analysis restricted the sample to these 17 nations.[18] The multiple linear regression equation was derived from 16 of the nations, excluding the United States, and then the American suicide rate was predicted from this regression equation. The results of the multiple regression analysis are shown in Table 2, together with the predicted suicide rate for the United States when the values for the American predictor variables are substituted into the regression equation.

It can be seen that the American suicide rate was not accurately predicted, 215 per million per year in 1980 as compared to the actual suicide rate of 120 per million per year. The reasons for why the American suicide rate is not as large as predicted remain obscure. It is noteworthy that, as compared to many nations of the world, the suicide rate in the United States has remained more or less constant in recent years and, apart from the possible success in treating depressed and suicidal patients with the various strategies that mental health and public health professionals have devised, it is unclear why there has been this stability in overall suicidal rates.

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[18] Australia, Austria, Belgium, Canada, Denmark, Finland, France, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, the United Kingdom, the United States and West Germany. Data on blood type were not available for Switzerland.

Discussion

Recent epidemiological trends in the American suicide rate, such as rising elderly suicide rates, were seen to be similar to trends in other nations of the world. Nations of the world have shown clear trends in male suicide rates during the 1970s and 1980s, and American male suicide rates have been consistent with these trends. Nations have shown less consistent trends in female suicide rates, and so it is difficult to draw conclusions about American female suicide rates. An examination of the time-series American suicide rate indicated that it was predicted by measures of social integration, such as marriage, divorce and birth rates in the way that Durkheim's classic theory of suicide predicted, again results consistent with those from other nations.

Finally, a review of the major perspectives on and predictors of suicide, both at the individual level and at the societal level, identified several possible correlates of national suicide rates. As an exercise, the American suicide rate was predicted based on a multiple regression equation derived from data from 16 industrialized nations, but this predicted suicide rate was considerably higher than the actual suicide rate. Reasons for this discrepancy are far from being apparent.

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Table 1: Results of the linear regressions over time (1970-1984) for 23 nations: Data shown are the b coefficients using rates per million

Nation	Suicide rate		
	men	women	men/women
Australia	0.22	-2.34*	0.14*
Austria	6.42*	0.62	3.34*
Bulgaria	4.24*	1.06*	2.17*
Canada	4.62*	-0.11	7.50
Chile	0.51	-0.42*	14.07*
Denmark	6.92*	3.39*	0.49
England & Wales	2.01*	-0.35	4.24*
Finland	2.95*	0.29	1.89
France	7.39*	2.96*	-0.25
Germany (FDR)	1.48*	-0.77*	2.14*
Greece	0.81*	0.16	1.86
Hungary	11.63*	5.24*	-0.56
Ireland	5.16*	2.41*	10.51
Israel	-0.17	-1.67*	5.16*
Japan	6.11*	-0.92	5.62*
Netherlands	3.45*	2.05*	0.37
New Zealand	4.19*	1.07	7.23*
Norway	7.14*	2.52*	-2.86
Portugal	0.29	1.43*	-9.86*
Scotland	4.24*	0.17	6.26*
Sweden	-2.30*	-0.75	-0.46
Switzerland	7.62*	3.26*	-0.43
USA	1.77*	-1.08*	8.32*

* statistically significant at the .05 level or better

Table 2: Elderly suicide rates in 1970 and the change by 1980

	males				females	
	total		elderly		total	
	elderly					
	rate	change	rate	change	rate	change
Australia	17.0	-3.5%	38.5	-17.1%	7.6	-26.3%
Austria	35.5	+6.5%	77.7	+10.3%	14.2	+4.9%
Bulgaria	16.1	+18.6%	108.3	+0.4%	7.7	+6.5%
Canada	16.2	+31.5%	24.6	+54.9%	6.4	+6.2%
Chile	9.6	-12.5%	19.9	+6.5%	1.9	-26.3%
Denmark	27.4	+50.0k	55.0	+47.8%	15.7	+42.0%
Engl/Wales	9.5	+15.8%	23.9	-9.6%	6.6	+1.5%
Finland	34.4	+20.9%	50.5	+19.0%	9.2	+16.3%
France	22.8	+22.8%	74.4	+33.9%	8.4	+32.1%
Greece	4.6	+2.2%	11.6	+43.1%	1.8	+5.6%
Guatemala	5.3	-60.4%	5.0	-44.0%	1.0	-70.0%
Hong Kong	15.5	-5.2%	88.7	-29.0%	11.8	+2.5%
Hungary	50.8	+27.0%	146.4	+38.1%	19.8	+33.8%
Israel	6.9	+17.4%	17.0	+115.3%	4.6	-17.4%

Italy	8.1		+24.7%	33.3		+12.3%	3.5
	+31.4%	7.8		+30.8%			
Japan	17.2		+29.1%	82.1		-10.7%	13.2
	-0.8%	66.3		-9.2%			
Netherlands	9.9		+29.3%	42.5		-3.3%	6.2
	+19.4%	17.5		-31.4%			
New Zea	12.6		+14.3%	31.2		+14.1%	6.6
	+7.6%	11.1		+60.4%			
Norway	11.8		+55.1%	13.3		+80.5%	5.0
	+32.0%	1.9		+147.4%			
Portugal	11.9		-5.9%	72.2		-25.6%	3.4
	+14.7%	11.7		-6.0%			
Scotland	9.5		+35.8%	21.7		+6.9%	6.0
	+21.7%	5.6		+44.6%			
Singapore	10.6		+17.0%	137.9		-22.1%	7.1
	+40.8%	53.6		+6.9%			
Spain	6.3		+6.3%	29.0		-1.7%	2.2
	+0.0%	6.9		-7.2%			
Sweden	31.3		-11.8%	48.8		+0.2%	13.2
	-14.4%	13.0		-12.3%			
Switzerland	27.4		+33.9%	74.1		+8.9%	10.1
	+50.5%	16.0		+45.0%			
USA	16.7		+11.4%	41.8		+4.1%	6.5
	-16.9%	6.7		-19.4%			
Venezuela	9.5		-11.6%	47.5		-1.5%	4.0
	-50.0%	5.3		-47.2%			
W.Germ	28.2		+0.4%	75.2		-3.2%	15.0
	-6.0%	27.0		-4.1%			

Table 3: Suicide rates (per 100,000 per year) in 1970 and changes by 1980 for the total population and for those aged 15-24

	total population		youth	
	1970	% change	1970	% change
Australia	12.4	-11.2%	8.6	+30.2%
Austria	24.2	+6.2%	16.5	+9.1%
Bulgaria	11.9	+14.3%	6.9	+34.8%
Canada	11.3	+23.9%	10.2	+50.0%
Chile	6.0	-18.3%	10.1	-31.7%
Denmark	21.5	+47.0%	8.5	+42.4%
Finland	21.3	+20.7%	14.7	+60.5%
France	15.4	+26.0%	7.0	+52.9%
Germany West	21.3	-1.9%	13.4	-6.7%
Greece	3.2	+3.1%	1.5	+20.0%
Hong Kong	13.6	-0.7%	7.7	+1.3%
Hungary	34.8	+29.0%	18.9	+5.8%
Italy	5.8	+25.9%	2.9	+34.5%
Japan	15.2	+15.8%	13.0	-3.8%
Netherlands	8.1	+24.7%	4.0	+50.0%
New Zealand	9.6	+12.5%	8.0	+73.7%
Norway	8.4	+47.6%	3.7	+224.3%
Portugal	7.5	-1.3%	4.5	+2.2%
Singapore	8.9	+25.8%	7.8	+32.1%
Spain	4.2	+4.8%	1.4	+92.9%
Sweden	22.3	-13.0%	13.3	-13.5%
Switzerland	18.6	+38.2%	13.0	+80.0%
Thailand	4.2	+76.2%	7.2	+77.8%
England/Wales	8.0	+10.0%	6.0	+6.7%
Scotland	7.6	+31.6%	5.8	+65.5%
USA	11.5	+2.6%	8.8	+39.8%
Venezuela	6.8	-23.5%	14.5	-28.3%

Table 4: Percentage change In youth and elderly suicide rates from 1980 To 1990

	Percentage Change				
	males			females	
	total	youth	elderly	total	youth	elderly
Australia	+26%	+51%	-2%	-7%	+4%	-13%
Austria	-8%	-13%	+26%	-10%	-18%	+5%
Bulgaria	+8%	+25%	-11%	+7%	-43%	+22%
Canada	-4%	-1%	-15%	-24%	-7%	-29%
Costa Rica	-45%	-6%	+14%	+14%	-65%	+infinity
Denmark	-12.%	-13%	-6%	-27%	-87%	+2 %
England/Wales	+10%	+83%	-10%	-45%	-33%	-44%
Finland	+19%	+36%	+50%	+16%	+21%	+5%
France	+6%	-10%	+6%	0%	-19%	+5%
Greece	+17%	+73%	+5%	-21%	+83%	-61%
Hong Kong	-12%	-10%	+6%	-14%	-12%	-29%
Hungary	-7%	-36%	-3%	-19%	+2%	-17%
Ireland	+73%	+154%	+289%	+9%	+21%	-47%
Israel	+17%	-38%	-1%	-5%		+175%	-47%
Italy	+13%	+11%	+34%	-11%	-17%	-8%
Japan	-8%	-45%	-14%	-5%	-43%	-19%

Netherlands	-4%	-1%	-17%	-3%	-3%
+24%					
New Zealand	+51%	+95%	+8%	-24%	-17%
-65%					
N Ireland	+107%	+87%	+20%	+56%	
+213%	+61%				
Norway	+27%	+8%	+29%	+21%	+91%
+68%					
Portugal	+21%	+42%	+8%	+15%	-24%
+45%					
Puerto Rico	+24%	-19%	+39%	-25%	-24%
-100%					
Scotland	+30%	+72%	-7%	-37%	-42%
-60%					
Singapore	+19%	+48%	-26%	+15%	-34%
+14%					
Spain	+67%	+65%	+81%	+86%	+55%
+102%					
Sweden	-13%	-13%	+13%	-8%	-9%
+31%					
Switzerland	-14%	-27%	+8%	-16%	-49%
+1%					
USA	+10%	+9%	+33%	-11%	-9%
+11%					
USSR	-24%	-24%	+6%	-16%	+5%
+6%					
West Germany	-21%	-21%	-1%	-32%	-20%
-8%					
Yugoslavia	+4%	-5%	+22%	+6%.	-36%
+28%					

Table 5: Spearman correlations between suicide rates and age over the six age groups* in 1980

	men	women
Australia	0.61	0.39
Austria	0.96	1.00
Bulgaria	1.00	0.86
Canada	0.57	0.34
Chile	0.43	-0.10
Costa Rica	0.68	-0.83
Denmark	0.79	0.39
Ecuador	-0.68	-0.97
England/Wales	0.96	0.86
Finland	0.61	0.61
France	1.00	1.00
Greece	0.78	1.00
Guatemala	-0.68	-0.10
Hong Kong	0.96	0.96
Hungary	0.96	1.00
Ireland	0.11	0.11
Israel	0.82	0.96
Italy	1.00	0.99
Japan	0.96	1.00
Netherlands	1.00	0.79
New Zealand	0.64	0.46
Northern Ireland	0.21	-0.19
Norway	0.64	0.29
Paraguay	0.14	-0.21
Portugal	1.00	0.78
Scotland	0.61	0.53
Singapore	0.82	0.86
Spain	1.00	0.96
Sri Lanka	0.14	-0.50
Surinam	0.54	0.43
Sweden	0.82	0.43
Switzerland	0.96	0.93
USA	0.79	0.04
Venezuela	0.96	-0.79
West Germany	0.96	0.96

Yugoslavia	1.00	0.96

* 15-24, 25-24, 35-44, 45-54, 55-64, and 65+

Table 6: Rates of suicide by each method for nations of the world: 1960-1964 (first row) and 1980 (second row)

	Total	E950	E951	E952	E953	E954	E955	E956	E957	E958
Australia	13.4	4.8	1.6	0.9	1.6	0.6	3.0	0.3	0.2	0.3
	10.9	2.8	0.2	1.4	1.5	0.4	3.5	0.2	0.4	0.6
Belgium	14.2	0.9	1.6	0.1	7.6	2.3	0.6	0.2	0.3	0.6
	22.0	4.5	0.1	0.2	9.0	3.3	2.6	0.2	1.3	0.8
Canada	7.6	1.2	0.0	0.7	1.7	0.6	2.9	0.2	0.2	0.2
	14.0	2.6	0.0	1.5	3.1	0.8	4.7	0.2	0.6	0.5
Denmark	19.2	5.6	3.9	0.4	5.9	1.4	1.2	0.2	0.5	0.3
	31.6	9.9	0.9	3.0	9.6	2.8	2.5	0.5	1.3	1.2
Engl/Wales	11.7	3.1	5.1	0.3	1.2	0.8	0.4	0.2	0.2	0.4
	8.7	3.2	0.0	0.9	2.1	0.7	0.4	0.2	0.4	0.7
France	15.5	0.9	0.9	0.1	8.0	2.2	1.7	0.2	0.3	1.2
	19.4	2.4	0.1	0.3	7.3	2.2	4.2	0.1	1.0	1.8
W. Germ	19.1	2.3	2.1	2.0	8.2	1.4	0.8	0.3	0.9	1.1
	20.9	5.1	0.0	1.2	8.9	1.1	1.3	0.3	1.4	1.6
Italy	5.5	0.6	0.4	0.0	1.8	0.7	0.7	0.1	0.8	0.3
	7.4	0.7	0.1	0.1	2.6	0.8	1.0	0.1	1.6	0.4
Japan	18.0	6.2	0.8	0.0	6.6	1.9	0.1	0.3	0.3	1.7
	17.6	1.1	0.9	1.1	9.4	1.3	0.1	0.4	1.2	2.0
Netherlands	6.5	0.8	1.4	0.0	2.3	1.3	0.1	0.1	0.2	0.3
	11.0	2.3	0.0	0.2	3.9	1.9	0.2	0.2	0.9	1.4
New Zeal	8.8	2.2	1.0	0.8	1.2	0.9	1.9	0.4	0.3	0.2
	10.8	1.7	0.1	1.9	2.6	0.9	2.1	0.3	0.9	0.3
Norway	7.3	1.2	0.1	0.1	2.7	1.0	1.6	0.2	0.3	0.1
	12.4	3.0	0.0	0.6	3.3	1.2	3.1	0.3	0.5	0.5
Scotland	8.3	2.2	3.4	0.1	0.8	0.8	0.3	0.2	0.2	0.3
	10.0	3.6	0.0	1.0	2.3	1.3	0.5	0.2	0.7	0.4
Switzerland	18.0	1.9	2.0	0.5	5.3	2.1	3.8	0.3	1.1	1.1
	25.4	3.6	0.1	2.2	6.8	2.6	5.0	0.5	2.5	2.1
USA	10.7	1.5	0.1	1.1	1.7	0.3	5.1	0.2	0.4	0.3
	11.8	1.3	0.0	1.1	1.6	0.2	6.8	0.2	0.4	0.2
Venezuela	5.6	1.6	0.0	0.0	2.0	0.0	1.3	0.1	0.4	0.2
	4.8	0.9	0.0	0.0	2.2	0.0	1.0	0.2	0.4	0.1

E950 solid or liquid substance E951 gas in domestic use
E952 other gases or vapors

E953 hanging, strangulation, suffocation E954 submersion, drowning
E955 firearms, explosives
E956 cutting or piercing instruments E957 jumping from a high place
E958 other and unspecified means

Table 7: Changes in the suicide rates from 1960-1964 to 1980 by method for suicide

	1960-1964 Mean (SD)	1980 mean (SD)	t (df=15)
overall	11.84 (4.99)	14.92 (7.25)	3.01*
solids/liquids	2.31 (1.75)	3.04 (2.22)	1.30
domestic gas	1.53 (1.50)	0.16 (0.30)	-3.73*
other gas	0.44 (0.55)	1.04 (0.83)	3.04*
hanging etc	3.66 (2.74)	4.76 (3.12)	4.02*
submersion	1.14 (0.69)	1.34 (0.96)	1.59
firearms etc	1.59 (1.44)	2.44 (1.99)	3.92*
cutting etc	0.22 (0.08)	0.26 (0.12)	1.38
jumping	0.41 (0.28)	0.97 (0.57)	5.78*
other methods	0.54 (0.47)	0.91 (0.67)	4.12*

* significant at the 1% level (two-tailed) or better

Table 8: Results of the multivariate time-series regressions for 27 nations

	constant	marriage rate	birth rate	divorce rate	R^2	Durbin-Watson statistic
Australia	8.928	0.004	0.189	-0.181	0.69	1.78
Austria	11.787**	-0.150	0.219	6.967***	0.81	2.03
Belgium	19.050	-0.869	-0.076	5.476*	0.95	1.89
Canada	10.796***	0.130	-0.192***	1.961***	0.98	1.56
Czechoslov	28.449***	0.382	-0.327	-2.649	0.79	2.36
Denmark	23.383	-0.251	-0.363	3.410	0.84	2.01
England/Wales	8.434**	-0.653*	0.390**	-0.043	0.95	1.30
Finland	19.639**	-0.137	-0.075	3.487*	0.86	2.16
France	12.078**	-1. 068**	0.437*	4.872***	0.95	2.28
Hungary	49.455**	-0.550	-0.213	3.204	0.96	2.45
Iceland	27.981	-0.355	-0.469	-2.904	0.20	1.71
Japan	3.126	0.590	-0.249	10.292*	0.86	1.11
Luxembourg#	21.666**	-1.113	-0.284	3.651	0.69	1.90
Mexico	1.418	-0.084	0.018	-0.121	0.27	2.01
Netherlands	5.286	0.036	-0.021	2.712***	0.96	1.62
New Zealand	11.322***	-0.282	-0.010	0.632	0.49	1.97

N. Ireland	-1.602	-0.352	0.373*	4.721***	0.65
2.13					
Norway	0.242	-0.738**	0.462	6.323***	0.96
1.93					
Portugal##	8.424***	-0.217	0.100	1.134	0.34
2.02					
Puerto Rico	2.104	-0.078	0.273*	0.407	0.65
2.06					
Scotland	6.653	-0.051	0.083	1.008	0.83
1.98					
Sweden	12.078*	-1.076	0.968*	0.337	0.58
2.03					
Switzerland	15.412	0.924	-0.488	5.357	0.90
2.06					
Taiwan	2.040	0.205	0.266*	2.649	0.80
2.10					
USA	16.310***	-0.368**	-0.151***	0.430***	0.92
2.08					
West Germany	26.757***	-0.754*	-0.038	-0.359	0.80
1.87					
Yugoslavia	32.110***	-1.175***	-0.242***	-3.701***	0.93
1.28					
positive:		7	12	20	
negative:		20	15	7	
significant & positive:		0	6	10	
significant & negative:		6	3	1	

interpolation used for three years of missing suicide rates

*** p< .001
** p< .01
* p< .05

Table 9: Results of the multiple regression analysis and the prediction of the American suicide rate
(decimal points were omitted in the analysis)

	b coefficient	American raw score*	contribution to American suicide rate
birth rate	0.170	159	27.03
divorce rate	0.235	522	122.67
alcohol consumption	0.062	813	50.41
% elderly	0.604	112	67.65
blood type	-0.576	447	-257.47
constant	205.017		205.02

multiple R: 0.72

Predicted American suicide rate: 215 per one million per year
Actual American suicide rate: 120 per one million per year

Suicide Studies, 2021, 2(2)

SELF-HARM AND SUICIDAL BEHAVIOR

Sara Martino & David Lester

Abstract: In a sample of over 4,700 individuals who were members of a body modification website, a strong association was found between engaging in cutting behaviors and engaging in suicidal behaviors.

Recent statistics in the United States indicate that between 1%-2% of the population engages in self-injurious behaviors, such as cutting (AACAP, 2006). It is more common in females than males, and the majority of those who self-injure are between the ages of 11 and 25 years old, and the behaviors tend to decrease throughout the 20's (Self Harm, 2006).

Self-mutilation may be viewed as a coping mechanism for some of those who engage in the behavior. Some of the "benefits" of cutting behaviors include a means of grounding for people who dissociate (shut out certain events or memories), a way to calm down during troubling times, and a way for releasing emotions. Self-mutilation has been more prevalent over time in our culture, especially among adolescents (AACAP, 2006). Examples of self-mutilating behaviors include cutting, burning, self-hitting, interference with wound healing, hair pulling (trichotillomania) and bone breaking (Favazza, 1998).

Some professionals refer to self-mutilation as "parasuicidal" behavior to indicate the low lethality of the behavior. Parasuicide indicates a suicidal or suicide-type behavior that it not intended to cause death. Common examples are cutting wrists or taking a non-lethal dose of pills. It is important to note that people who engage in self-mutilation are at greater risk for suicidal ideation and attempts (Soloff, et al., 1994; Krysinska, et al., 2006).

Women who self-mutilate are typically trying to alleviate depression, anxiety, or stress. They are then also more susceptible to other methods of reducing their emotional distress, and one of those behaviors is suicidal ideation or behaviors. Some researchers (ie.g., Soloff, et al., 1994) have found that women diagnosed with borderline personality disorder who also self-mutilated have more serious suicidal ideation and more recent suicide attempts than controls.

Lester (1993) analyzed data from a study by Bongar, et al. (1990) on self-mutilation in patients with borderline personality disorder and found that recent self-mutilation was associated with a history of attempted suicide. In a sample of adolescent psychiatric inpatients, Zlotnick, et al. (1997) found that those who had attempted suicide had more often self-mutilated in the prior year. Soloff, et al. (1994) also found that patients with BPD who self-mutilated were more likely to attempt suicide and have more

serious suicidal ideation, although they were not more depressed. The suicidal behavior of those who self-mutilated was more manipulative but did not differ in lethality.

The current study was designed to explore the connection between self-mutilation and suicidal ideation and attempts. Through a large web-based study, participants were asked about their behaviors, including self-mutilation and suicidal ideation. Participants in this study are from the general population and not from a clinical population as in previous studies (e.g., Zlotnick, et al., 1997). The hypothesis was that there will be a significant correlation between a history of self-mutilation and suicidal ideation and suicide attempts in a normal population.

Method

The website www.bmezine.com is a website for those interested in body modification. It has a smaller community (iam.bmezine.com: IAM) in which members can create personal pages that include a diary and photos. All members of IAM were sent an online survey in July 2003 with an incentive for those who responded of one-month free access to the IAM website (Larratt & Fowler, 2003). Larratt and Fowler (iam.bmezine.com/msmoreinfo.html) stated that, "well over 50% of AIM members responded to the survey, and only "slightly over 2% of respondents appear to have simply clicked through the survey without actually voting." The high response rate makes the results of the survey quite reliable.

There were 4,700 usable responses: 2078 men, 2581 women, and 31 others (including transgendered people and eunuchs). Regarding sexual orientation, 56.5% of the sample described themselves as heterosexual, 5% as homosexual, and 37.9% as bisexual. The modal and median ages were both 20-21: 8.9% were under the age of 18, while 11.5% were over the age of 30. In terms of ethnicity, 88.4% of the sample was Caucasian, 4.9% Hispanic or Latino, 3.7% Asian or Pacific Islander, 4% Native Americans, and 1.2% African American.

In terms of education, 44.9% of the sample were students, full-time or part-time, 26.9% had finished only high school, while 9% had less than a high school education; 12% had a BA degree and 2.8% a graduate degree. As far as employment is concerned, 67.7% were employed full-time or part-time, 9% were self-employed, while 23.1% were not employed. For those working and willing to state their income, the modal income was $10K-$20K. Only 7.6% had ever received welfare and 7.5% food stamps. Only 8% lived in rural areas, and 11.7% lived in villages or small towns. In general, the sample, was urban and suburban, well-educated or in college, and young adults.

Of the sample, 94.8% were raised with their mother and 74.8% with their father. Only 4% had a step-mother and 8.9% a step-father; 79.7% felt close to one or both of their parents. Only 9.9% had children, with a further 1% currently (or partner) pregnant.

Abuse was quite frequent in the background of the respondents: 6.3% reported physical abuse from their mothers, 14.5% mental abuse and 0.3% sexual abuse; 11/8%

reported physical abuse from their fathers, 19.4% mental abuse and 1.9% sexual abuse. Abuse from siblings and other relatives and non-family members was also reported. Of the respondents, 13.3% had been kicked out of the house, and 12.8% realized that they were not the favorite child; 16.7% felt that they were the family scapegoat, while 36.6% felt that they were punished for "being who you are." Although there is no control group, these percentages seem rather high.

In terms of loss, 5.2% had experienced the death of a father, 2.3% a mother and 1.7% a sibling.

Respondents were asked 281 questions, and answers remained anonymous. Control questions indicated that only 0.3% of respondents were not responding accurately, while 2% appeared to have looked at the questions without responding.

Results and Discussion

Table 1 present the crosstabs between cutting and suicidal ideation and attempts. It is clear that for the total sample and for men and women separately, there was a strong association between past and current cutting and suicidal behaviors. For the total sample, for those current engaging in cutting, 42% had made more than one suicide attempt versus 6% of those who had never engaged in cutting (37% versus 5% for men and 44% versus 7% for women). These results confirm the association between self-mutilating behaviors and suicidal behaviors.

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Table 1

Total sample:

	Suicidality			
	none	ideation	1 attempt	>1 attempt
cutting				
never	1310 (50%)	952 (37%)	187 (7%)	154 (6%)
only in past	232 (14%)	697 (43%)	253 (16%)	422 (26%)
currently	37 (8%)	161 (35%)	70 (15%)	191 (42%)

$X^2 = 1014.11$, df = 6, p <.001

Men

	Suicidality			
	none	ideation	1 attempt	>1 attempt
cutting				
never	789 (56%)	480 (34%)	75 (5%)	67 (5%)
only in past	88 (18%)	227 (45%)	66 (13%)	121 (24%)
currently	25 (18%)	46 (32%)	19 (13%)	52 (37%)

$X^2 = 397.08$, df = 6, p <.001

Women

	Suicidality			
	none	ideation	1 attempt	>1 attempt
cutting				
never	515 (44%)	469 (40%)	108 (9%)	86 (7%)
only in past	142 (13%)	466 (43%)	185 (17%)	295 (27%)
currently	10 (3%)	114 (37%)	49 (16%)	135 (44%)

$X^2 = 514.54$, df = 6, p <.001