THE EFFECT OF DOMESTIC AND ECONOMIC STRESS ON SUICIDE RATES IN CANADA AND THE UNITED STATES

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The study of the variation in societal suicide rates still is guided primarily by Durkheim's (1897) theory. He proposed primarily a social integration/ regulation theory of suicide. One useful way of exploring this theory is from a cross-cultural perspective. Rates of birth, divorce, marriage, and unemployment were analyzed in comparison to rates of suicide from 1950 to 1985 in Canada and the United States. Results generally supported Durkheim's theory except for marriage. There was no association between marriage and suicide in Canada, whereas in the United States marriage had a protective effect once other variables were taken into account. Divorce rates were associated positively and birth rates associated negatively with suicide in both countries. Unemployment rates added little predictive power to suicide rates. A historical perspective and caution about overgeneralizing the results are presented.

The study of the variation in societal suicide rates still is guided primarily by the theory set forth by Durkheim (1897), who proposed that the rate of suicide was affected by two social characteristics. Suicide rates are high when the degree of social integration (that is, the extent to which members of the society are bound together in social relationships) is very low (leading to *egoistic suicide*) or very high (leading to *altruistic suicide*). Suicide rates are also high when the degree of social regulation (that is, the degree to which the desires and behaviors of the members of the society are controlled by societal norms and customs) is very low (leading to *anomic suicide*) or very high (leading to *fatalistic suicide*).

Modern sociologists have noted that altruistic and fatalistic suicide are rare in modern industrialized societies and that it is often difficult empirically to measure social regulation apart from social integration. Thus, one modern version of Durkheim's theory (Johnson, 1965) states that societal suicide rates are higher when the degree of social integration/regulation is lower.

This theory has been tested in several countries. The divorce rate commonly is thought to be a good measure of a society's degree of social integration/regulation, and Stack (1990) found that in Denmark from 1951 to 1980 the suicide rate was associated positively with the divorce rate, while Yang, Lester, and Yang (1992) found the same to be true for Taiwan.

Clark (1962), Cunliffe (1974), Lipset (1990), and others have recommended that an understanding of a nation's social pattern often can be gleaned from cross-cultural comparisons, especially if the nations are similar. Canada and the United States are obvious units of comparison. These two countries share not only close proximity, but similar languages and cultural backgrounds. They also have been the subjects of continuing comparisons in art, literature, politics, religion, etc. (Lipset, 1990). A neglected

area of comparison, even in encyclopedic volumes that compare these two nations (e.g., Lipset, 1990), is suicide.

A recent series of studies have examined differences in suicide in Canada and the United States (Domino & Leenaars, 1989; Leenaars, 1989, 1992a, 1992b; Leenaars & Domino, 1993; Leenaars & Lester, 1990, 1992a, 1992b, in press). Rates of suicide differ in Canada and in the United States. For example, Canada's rate is higher. The rate of suicide in Canada's youth is significantly higher. The relation between suicide and homicide in these two countries is different. People's levels of knowledge are the same in these two countries, as are the suicide notes. Attitudes toward suicide in these two countries, however, are strikingly different. Canadians see suicide more as related to mental illness and the cry for help and more strongly endorse the right to die. Americans, on the other hand, see suicide more as related to religion and moral evil. Although not true for the general population, Canadian young people see suicide more as normal and as a better way to cope with problems.

In order to pursue the comparison of suicide in Canada and the United States, the present study explored the relationship between measures of social integration/regulation and suicide rates in Canada and the United States for the same time period.

A great deal of research has implicated economic stress, typically measured by the unemployment rate, as a correlate of suicide (Platt, 1984). For example, Stack (1990) found that both divorce and unemployment were associated with the suicide rate in Denmark from 1951 to 1980. Accordingly, the present study also explored the impact of economic stress on suicide.

METHOD

For the period 1950 to 1985, suicide rates were available for Canada from Statistics Canada and for the United States from the National Center for Health Statistics (annual).

Rates of birth, divorce, and marriage were obtained from a common source for both nations, the *Demographic Yearbook* of the United Nations (United Nations, annual/a) while the unemployment rates, both based on surveys of the labor force, were obtained from the *Statistical Yearbook* of the United Nations (United Nations, annual/b).

The time series regression analysis was carried out with Doan (1990) using the Cochrane-Orcutt method to correct for serial autocorrelation.

RESULTS

The Pearson correlations between the social and economic measures and the suicide rates of Canada and the United States are shown in Table 1, along with the results of the regression analysis.

It can be seen that divorce rates were associated positively and birth rates associated negatively with suicide rates, both in the simple correlational analysis and in the regression analysis for both Canada and the United States. Thus, social integration (operationally measured by low divorce rates and high birth rates) seems to be associated with low suicide rates in both Canada and the United States, as Durkheim predicted.

Interestingly, marriage rates were associated positively with suicide rates in the United States in the simple correlational analysis, but not in Canada. However, the association for the United States was negative in the regression analysis, indicating that marriage has a protective effect on suicide once other variables are taken into account. The regression analysis, is, therefore, congruent with Durkheim's theory of suicide, while the simple correlational analysis is not congruent.

Although unemployment was associated positively with suicide rates for both nations in the correlational analysis, the association was no longer statistically significant

Table 1
*The Associations between Measures of Domestic and Economic Stress and Suicide Rates in Canada
and the United States*

| | Canada | | United States | |
| | Pearson | Regression | Pearson | Regression |
	r	b	r	b
Divorce rate	.97**	1.758**	.90**	.431**
Marriage rate	.06	.292	.56**	−.370*
Birth rate	−.93**	−.196**	−.90**	−.151**
Unemployment rate	.73**	.099	.49*	−.001

*two-tailed *p* < .01. **two-tailed *p* < .001.

in the regression analysis, which indicates that domestic stress is a much stronger predictor
of societal suicide rates and that unemployment adds little predictive power.

DISCUSSION

Durkheim's (1897) theory appears to be useful in understanding suicide in both coun-
tries. Social integration/regulation appears to be associated with suicide rates, as
Durkheim predicted, in both Canada and the United States. Divorce rates were associated
positively with suicide in both nations, while birth rates were associated negatively. In-
terestingly, in the United States marriage has an inhibiting effect on suicide once other
variables are taken into account, but there is no association in Canada. In both coun-
tries, unemployment added little to the predictive power with regard to societal suicide
rates. Domestic stress, thus, may be the most useful variable to examine in the study
of suicide. It appears that Canada and the United States show similar socioeconomic
correlates to suicide, and yet there is a different pattern in marriage rates. Atwood (1972),
Lipset (1990), and others have proposed that, indeed, marital and familial characteristics
are seen differently in the United States and in Canada. In Canada marriage and family
are seen as a trap, while in the United States these are seen as defining one's freedom.
Is this why marriage has a protective quality in the United States, but has no such associa-
tion in Canada? It appears that idiographic investigation may assist us here in understand-
ing the nomothetic findings.

Overall, socioeconomic factors seem important in understanding suicide in both
countries. Divorce is an especially important index, as Yang, Lester, and Yang (1992)
found in the United States and Taiwan and Stack (1990) found in Denmark. However,
the association is not universal; it is not found, for example, in Northern Ireland (Lester,
Curran, & Yang, 1991), and so it is important to check the validity of the association
for a particular nation.

Our study also suggests that caution is in order with regard to correlational studies
when one is studying societal patterns and suicide. For example, Boor (1980) found an
association in both countries between unemployment rates and suicide. Our correla-
tional analysis replicated that observation, although the association was no longer
statistically significant in the regression analysis. However, cause-and-effect conclusions
cannot be drawn from correlational studies, and caution is warranted in attributing the
causes of suicide to domestic integration or economic stress.

The obvious question arises, despite similarities, as to why differences exist between
Canada and the United States. Durkheim's theory (1897) needs to be sensitive to cultural
nuances. Clark's (1976; see Hiller, 1982; Lipset, 1990) historical framework continues
to provide a basis for speculation. There is a difference in how people in these two nations

settled their frontier, and there is a difference in revolutionary attitude. How are these historical events related to our findings? Weber (1949) argued that historical events, indeed, explain current differences. By analogy he argued that as one rolls a dice (i.e., a decision) a certain number (that same decision) becomes more likely to be repeated. A decision in Canada reinforces that decision. Another in the United States reinforces that decision. The nations' histories reinforce values and behaviors, such as marriage, suicide, etc. Durkheim (1897) already explicated this reasoning in his theory of suicide.

The current study, of course, warrants caution about overgeneralizing the results, as noted, for example, in the statistical analysis. Yet, it does seem that socioeconomic analysis is a viable avenue, as Durkheim (1897) stated, in understanding suicide.

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