

Short communication

Testing Durkheim's theory of suicide in nineteenth and twentieth century Europe

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Summary. Modern correlation analyses confirm Durkheim's (1888) conclusion that lower birth rates in European nations are associated with higher suicide rates for both data from the 1870s and from 1980.

Key words: Suicide – Fertility – Europe

Introduction

Durkheim (1897) published his classic work on suicide at the end of the nineteenth century, but his book was preceded by an article published nine years earlier (Durkheim 1888). In this earlier article Durkheim was concerned with the declining birth rate in France. During the 1800s, the population of France was growing at a lower rate than the populations of other major European nations, and this caused the French great concern (John-

son 1994). Along with this concern over fertility, France had a high suicide rate, and Paris had the highest suicide rate of any European city (Legoyt 1881).

Durkheim set out, then, to examine the relationship between suicide and the birth rate, expecting that a low birth rate would be associated with a high suicide rate due to an intervening variable which he called the level of "family feeling" in the societies studied. As Johnson (1994) has pointed out, Durkheim was hindered in this task by the lack of knowledge about inferential statistics at the time. However, Johnson examined the sources used by Durkheim and collected rates of suicides and births for European nations in the 1870s. Camp (1961) has provided marriage rates, another variable of interest to Durkheim, and these data permit us to apply modern techniques of correlational analysis to these data.

For comparison purposes, data for these same rates were obtained for the same nations where possible for 1980 from the United Nations (1986) and the World

Table 1. Marriage, birth and suicide rates in the 1870s and 1980

	Births/1000 1865–1876	Marriages/1000 1871–1880	Suicides/1000 various years in 1870s	Births/1000 1980	Marriages/1000 1980	Suicides/1000 1980
Austria	38.7	8.5	12.2	12.0	6.1	26.0
Belgium	32.1	7.2	6.7	12.6	6.7	21.5
Denmark	30.9	7.9	26.7	11.2	5.2	29.1
England and Wales	35.5	8.1	7.0	13.2	7.5	8.7
Finland	34.5	8.3	3.1	13.2	6.1	24.7
France	25.7	8.0	15.0	14.9	6.2	19.2
Ireland	26.8	4.7	1.7	21.8	6.4	6.2
Italy	37.1	7.7	3.1	11.3	5.7	7.1
Netherlands	35.6	8.1	3.5	12.8	6.4	10.2
Norway	30.3	7.3	7.4	12.5	5.4	12.4
Scotland	35.1	7.2	3.4	13.3	7.5	9.9
Spain	35.7	7.8	1.7	15.2	5.7	4.4
Sweden	30.4	6.8	8.1	11.7	4.5	19.1
Switzerland	30.4	7.7	19.6	11.7	5.6	24.7

Health Organization (annual) except that, due to changes in national boundaries, Germany was excluded from the analyses. The rates are shown in Table 1.

Results and discussion

The correlations between the suicide rates and the social indices for the 1870s and for 1980 are shown in Table 2. It can be seen that the associations were weaker in the 1870s than in 1980 (the Pearson correlation coefficients did not reach statistical significance for the 1870s). However, for the 1870s, in the multiple regression analysis, the lower the birth rate the higher the suicide rate, as Durkheim concluded. A higher marriage rate was associated with a higher suicide rate too, a conclusion which would have been opposite to that predicted by Durkheim in his later book (1897).

In 1980, the simple correlational analysis indicated that a higher birth rate was associated with a lower suicide rate, as in the 1870s, but now a higher marriage rate was associated with a lower suicide rate too. The multiple regression analysis confirmed this pattern.

Table 2. Results of the correlational analyses

	Correlation (<i>r</i>)		Regression (β)	
	1870s	1980	1870s	1980
Suicide rates and marriage rates	0.29	-0.33	0.68*	-0.22
Birth rates	-0.33	-0.47*	-0.70*	-0.41
Multiple <i>R</i>			0.66	0.52

* One-tailed $P < 0.05$

In his 1888 paper, Durkheim was also interested in a compound variable, the birth rate minus the death rate, which today is called the natural increase. This variable was not associated with suicide rates in the present data set for the 1870s ($r = 0.09$) but was significantly associated with suicide rates in 1980 ($r = 0.52$, $P < 0.05$).

The present data indicate that Durkheim was correct in his conclusions from the data he had available in 1888. A lower birth rate in European nations was associated with a higher suicide rate, and thus France's demographic picture could be seen to be part of a general "law". The results also indicate that different laws may apply in present times. In particular, a high marriage rate may have different social significance in an era when divorce is common. Marriage rates may be higher today, not simply because more people are starting families, but because more divorced people are remarrying. It is also important to note that birth rates are much lower in 1980 than they were in the 1870s.

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