

THE SOCIAL COSTS OF UNEMPLOYMENT

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ABSTRACT

Suicide rates in the United States have been steadily rising in proportion to other causes of death. The high incidence of suicidal behavior constitutes a major social and public health problems. The unemployment rate above the natural unemployment rate involves economic and social costs. The development of suicide prevention programs at the federal, state, and local levels has occurred to prevent suicides. This paper uses multivariate analysis to examine the determinants of suicide rates. The results revealed the importance of divorce rate, percentage of white population, and unemployment rate on the suicide rate.

INTRODUCTION

Unemployment imposes economic, psychological, and social costs on the nation. The main economic cost of unemployment is the decline of the nation's output and reduced income and some skills of the unemployed. However, the society at large also bears part of the economic cost through loss of tax revenue and an increase in government support payments such as unemployment compensation. The psychological costs of unemployment are felt primarily by the unemployed and their families. Studies show that lengthy periods of unemployment can lead to a loss of self-esteem, depression, and even suicidal behavior (endnote 1).

The social costs of unemployment are a result of the economic and psychological effects. The unemployed tend to feel anger, frustration, and despair. There is some evidence that an increase in unemployment tend to be associated with increases in crime, domestic violence, alcoholism, drug abuse, divorce, and other social problems.

Schapiro and Ahlburg [5] found that unemployment has a significant effect on suicide. They stated that a one percent increase in unemployment rate results in one percent increase in the suicide rate. Their study showed that suicide for more affluent middle aged males are far more responsive to unemployment, and non white have less suicide rates than white.

THE MODEL

The hypothesized model is additive and stated by the following relationship:

$$S = a + bD + cW + dUE + eFM + U$$

Where:

a = constant term or intercept

D = divorce rate per 1,000 population

W = percent of white population

UE = unemployment rate

FM = the ratio of female population to male population

U = residual

The coefficients b, c, d, and e are the estimates of the regression coefficients for the explanatory variables D, W, UE, and FM, respectively. The estimated coefficients b, d, and e should be positive and significant, and c should be negative and significant.

The hypothesis thus states that there are associations between completed suicide and some aspects of marital status. Relationship exists between persons live alone and suicide, this includes persons who are single, widowed, or divorced.

In the past forty years the differential between suicide rates for whites and nonwhite has narrowed. The suicide rate among nonwhite males increased gradually, while it declined for white males. The ratio of white to nonwhite was 3.26 in 1940 and decreased to 1.82 in 1978. There were 3.48 white females that committed suicide for each one nonwhite female in 1940. This ratio declined to 2.09 in 1977. The increase in percentage of nonwhite population will have a positive effect on the suicide rate.

Employment problems, fears of redundancy or dismissal and fears of promotion are common sources of anxiety and distress. The fast changing technological society fears have generally become much more common and are especially present among people who have passed middle age. Problems of finance have perhaps been more in the public eye in suicidal behavior than many of the other associated factors. These problems cause great stress for many, but the role that financial problems have really played in suicide and attempted suicide is not clear.

Female participation in the labor force has increased tremendously after the Second World War, especially in the 1960's. Women now face the pressure and stress of work outside the home as much as males, which may have resulted in the increasing suicide rate.

To test the hypothesis time series data were collected for 28 years from 1951 to 1978. The stepwise multiple regression approach was used to identify the relative strengths and statistical significance associated with the independent variables. Variables with insignificant coefficients were then deleted from the final regression runs to insure more efficient models.

Table 1 summarizes the final regression analysis that includes only those independent variables that are significantly related to the dependent variable.

The regression results show a coefficient of determination for the regression of 0.938; that is to say, that the set of independent variables explains 93.8 percent of the variation in the suicide rate. The correlation is highly significant as demonstrated by the F value of 121.60 that is significant at the 0.001 probability level. The estimated regression coefficients for all independent variables are statistically significant at the 0.01 probability level.

Table I
Multiple Regression Results Where Suicide Rate
Is The Dependent Variable

Variable	B	Standardized Regression Coefficient (beta)	T Statistics
Divorce rate	0.0928	0.4457	3.6987
Percentage of white	-0.4378	-0.4383	-3.6361
Unemployment rate	0.1165	0.1757	2.9221
Constant	47.8884		
F = 121.6031		R ² = 0.9383	

The divorce rate is significantly related in the predicted direction to the suicide rate. The beta of 0.446 represents the highest one in the model. Also, as hypothesized, percentage of White has significant effect on the suicide rate, as indicated by the beta of -0.438 and the significant t-statistic. The unemployment rate has the anticipated positive effect on the suicide rate, with a beta of 0.176. The regression found no effect of the ratio of female population to male population on the suicide rate.

A one unit increase in divorce rate will result in an increase of 0.0928 in suicide rate. But an increase of the unemployment rate by one percent increases the suicide rate by 0.1165. If the percentage of whites increases by one percent the suicide rate will decrease by 0.4378.

The elasticities of the independent variables were calculated to compare the strength of the effect of these variables. Since the postulated form of the relationships is linear in arithmetic values, the computed elasticities are based on the arithmetic means of the variables.

A one percent increase in divorce rate is associated with increase in suicide rate by 0.108 percent. While a one percent increase of whites in the population will reduce suicide rate by 3.479 percent. A one percent increase in unemployment will result in an increase in suicide rate by 0.054.

CONCLUSIONS

Difficulties are faced in the classification of suicide and suicidal behavior. It is obvious that on many occasions, it can be difficult to decide whether a death has been the result of suicide or not. Suicide can be camouflaged by accidents. However, statistical analysis of mortality by suicide gives a rough approximation of the extent of the problem. Suicide statistics are of great value when studying change between different periods of time.

Changes in the socioeconomic characteristics of the population cause significant increase in suicide rates especially among females and nonwhite. The study revealed the effect of unemployment on suicide. In addition suicide rate increases by increase in divorce rate and decreases as percentage of white population increases

ENDNOTES

1. For a survey of the literature on the psychological effects of unemployment see William Darty, Jr., and Arthur H. Goldsmith (2 pp 121-140)

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