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Suicide Rates in the World: 1950–2004

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The cross-country differences and the trends of suicide rates in 71 countries from 1950 to 2004 are described. The data are from the World Health Organization's Mortality Database. It shows that suicide rates vary greatly across countries, even within the same region or at similar levels of development. Random-effect models were used to examine the between-country and within-country stabilities in suicide rates. The results show that more than 90% of the variance in suicide rates is due to between-country differences, suggesting suicide rates display a strong temporal stability.

Suicide rates in the world differ greatly across countries. Such geographical variations are central to Durkheim's (1897/1951) argument that social factors have an important role in suicide. In this study I describe the cross-country differences and the trends of suicide rates in 71 countries that had ever reported mortality data to the World Health Organization (WHO) between 1950 and 2004. It updates the findings from the previous studies using the same data source (Bridges & Kunselman, 2003; Levi et al., 2003; Schmidtke et al., 1999) and provides the latest overview on the suicide rates in these countries.

Another aim of this study is to apply a new method to quantify the temporal stability of suicide rates. Since Durkheim, the historical stability of country-specific suicide rates often has been mentioned in the literature (e.g., Lester, 1996). Previous studies attempted to gauge the extent of this stability by measures such as percentage change, ranking, and range (e.g., Levi, et al., 2003). These measures, however, in themselves do not provide a meaningful baseline on the magnitude of the overall stability of suicide rates. Random-effect models, in contrast, can estimate the proportions of variance that are due to between-country and within-country differences (Rabe-Hesketh & Skrondal, 2005). This study makes use of this unique feature of random-effect models and provides precise estimates of the historical stability of suicide rates.

DATA AND METHODS

The data are from the WHO's Mortality Database (WHO, 2006). There were 124 WHO member countries that had ever reported data to the WHO between 1950 and 2004.[1] (The term *country* here also refers to territories or regions, as appropriate. Certain regions, such as Hong Kong, submit mortality data to the WHO independently. Separate statistics also are reported for the rural and urban populations in China.) The countries differ in the years that data are available and the extent of misclassifications and underreporting; however, it is unlikely that

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1. The latest data used by Bridges and Kunselman (2003) were from 2000. The latest data from Levi et al. (2003) and Schmidtke et al. (1999) were from 1999 and 1997, respectively.

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