Abstract

Introduction During the last decade we have observed important climate changes, especially in environmental temperatures. There is considerable information linking the increase in hot weather and human health. For example, hot weather is associated with an increased risk of suicide in different countries around the world. Objective To evaluate the relationship between suicide rates and the environmental temperature in Baja California Sur, Mexico, from 1985 to 2008. Method Suicide mortality data for Baja California Sur (BCS) were obtained for the years 1985-2008 from the Instituto Nacional de Estadística, Geografía e Informática (INEGI). The selected codes were: E950-E959 (ICD-9) and X60-X84, Y87.0 (ICD-10) for BCS. The BCS weather data used was the maximum temperature from 1985 to 2008, obtained from the Extractor Rápido de Información Climatológica (ERIC III). Lineal and quadratic models were used to assess the annual rate changes of suicide and generalized linear models (GLM) to assess the effect of the climatological variables to the suicide rate. The p=0.05 was considered significant. Results In BCS, 582 suicide deaths were reported from 1985 to 2008. The 9% (53) of the total reported were women with a yearly average rate 1.6/100 000; 91% (529) were men with a yearly average rate 16.3/100 000. Lineal and quadratic models explained the tendency of the annual increment observed in the number of suicides in both seasons. The quadratic model better explained such increment during the warmer months (R2=0.64 p<0.01). The temperature was positively correlated with the rate of suicides in both seasons (p<0.01). Two predictive GLMs were created by season. Discussion These results suggest a potential link between an increase in environmental temperature and the rates of suicide during 24 years in BCS. This relationship is clear during the hot season; however, a positive trend was found during the cold season, perhaps due to the result of warmer winters.

Keywords

Climate changes, suicide, Baja California Sur.