

# **Suicide rates and the association with climate: A population-based study**

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## **Abstract**

**BACKGROUND:** Seasonality of suicide has been noted in several studies. A spring peak of suicide was observed, and associations between various climatic parameters and suicide have been suggested. This study sets out to verify seasonal patterns of suicide rates and to explore the association with climate in Taiwan. **METHOD:** The study used a nationwide mortality database in Taiwan from January 1997 to December 2003. An autoregressive integrated moving average model was applied to examine the presence of seasonality and the association of climate with suicidal death. **RESULTS:** Seasonality with a spring peak was evident in suicidal death regardless of gender or age. Ambient temperature was positively associated with suicide after adjustment for trend and seasonality. **LIMITATIONS:** Misclassification and underreporting of suicidal death in the registry system might confound the results. Ecological fallacies might exist. **CONCLUSIONS:** The seasonal effect on suicide is significant in Taiwan. Suicide rates may be influenced by ambient temperatures. The findings are of research interest for future studies regarding mechanisms of suicidal behavior, and also of practical interest for better timing of suicide interventions and effective preventive strategies.