



Pathology Biology Section – 2007

G28 Seasonal Incidence of Suicides in Crete Island: A Five Year Study

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After attending this presentation, attendees will learn information concerning seasonal peaks of the suicide rates, as well as the reasons for this distribution in Mediterranean countries.

This presentation will impact the forensic community and/or humanity by increasing understanding of the suicide incidence during all year round in a country with many special factors (religion, weather conditions, people's attitude, Mediterranean temperament etc.).

Suicide is defined as the intentional act of self-destruction committed by someone who knows what he or she is doing, and who is aware of the probable consequences of his or her action. The epidemiology of the suicide phenomenon is always of major interest in contemporary forensic science. Studies have shown that suicide in some countries constitutes the third, or even the second most common cause of death for persons aged between 15 and 24 years, including accidents and homicides.

In order to study this phenomenon on the island of Crete, a retrospective analysis of all suicide cases for the period 1999 to 2003 was conducted, based on the archive files of the Department of Forensic Sciences (Medical School, University of Crete, Greece), which serves the entire region. Crete is an island (the southernmost island in Europe) with a population of about 750,000 inhabitants with millions of tourists annually.

The parameters chosen were the personal data of the subjects (age, sex, and nationality), the information concerning time and location where death occurred (date and exact time of the incident, area, and exact location), and the cause of death. In a total of 183 cases, 80.0% of them involved men and 20.0% women. One hundred seventy-two cases concerned persons of Greek nationality (94.0%) and the rest concerned foreigners. Thirty-six incidents (19.7%) occurred in 1999, 51 (27.9%) in 2000, 30 (16.4%) in 2001, 30 (16.4%) in 2002 and 36 (19.7%) in 2003.

Hanging prevailed as the main cause of death (41.0%), followed by chemical substance overdose (drugs and pesticides, 26.8%), and firearm injuries (gunshot and shotgun wounds, 21.2%). The age specific suicide rates per year were 20.0%, 16.4%, 13.1%, 15.3%, 12.0%, 12.6%, and 7.7% for 21-30, 31-40, 41-50, 51-60, 61-70, 71-80, and 81-90 age groups respectively. Four persons were of undetermined age. Seventy-one out of 183 (39.0%) cases occurred at the region of Heraklion, which corresponds with the population distribution of Crete.

The bimodal seasonal peak in the suicide rate observed in this study was in agreement with several other reports, indicating that suicide follows a seasonal pattern with a dominant peak during the spring or early summer (months of maximum day light, 14.2% and 12.0% stand for June and May respectively) and a lesser peak in the autumn. The spring peak in the suicide rate has been typically observed in Mediterranean countries. It has also been reported that agricultural populations have a longer spring peak, while industrial populations have a shorten one. This should be considered as a further explanation for the extended spring peak observed, since the suicide incidence was higher in rural areas, which were represented by 61.2%.

The suicide incidence in Crete (3.9 per 100,000 inhabitants) seems to be lower than the reported average in Greece (7.1 per 100,000 inhabitants), but higher compared to other Greek geographical regions, e.g., a suicide incidence rate of about 2.7 stands for Epirus, at the north-western coast of Greece.

Suicide, Seasonal incidence, Crete Island