

I8 Trends in Suicide: A Postmortem Analysis of a 20-Year Case History by the Unit of Legal Medicine of Pavia

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Learning Overview: After attending this presentation, attendees will recognize the importance of more deeply studying the phenomenon of suicide from several points of view, especially including the retrospective and the postmortem views, for the immense value these data have in the prevention field.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by recognizing trends about suicide phenomenon and providing knowledge in order to perform tailored programs to this population, offering evidence-based treatment and gender-sensitive methods to these vulnerable individuals.

In 2012, as reported by the World Health Organization (WHO), 804,000 suicides have been documented worldwide with an annual standardized global rate of suicide of 11.4 individuals per 100,000 population.¹ Italy ranks among the countries with a low suicide rate; in 2015, there were 6.1 per 100,000 who died from suicide. Even though it is a lower value than the European trend, suicides still remain a public health problem. Analyzing the phenomenon in detail, important aspects emerge regarding the characteristics of the suicide victims.

Aims: The aim of the study is to investigate the phenomenon of suicide in cases analyzed by the Unit of Legal Medicine and Forensic Sciences “A. Fornari” of Pavia, in the 20-year period from 1999 to 2019. The evaluation is not limited to providing useful qualitative-statistical data, but represents an important starting point to further investigate the risk factors related with suicidal events.

Materials and Methods: For each case, the following variables were taken into consideration: personal data, social status, medical, and forensic evaluations.

Discussion: In the 20-year period examined, 724 autopsies involving subjects whose death had been classified as suicide were performed (545 men and 179 women). The average age of the cases examined was 50.16 ± 20.2 years (12–100 years). The most frequent cause of death was mechanical asphyxia concerning the death of 334 people, followed by self-inflicted gunshot wound (117 deaths), poisoning (86 deaths), falls from height (81 deaths), road traffic injuries (39 deaths), stab or cut wounds (35 deaths), and death caused by fire (17 deaths). Regarding the most frequent causes of death analyzed by gender, the data shows that the most frequent method in both genders is mechanical asphyxia. It is interesting to highlight that in males the most frequently chosen method is hanging (drowning/other acute mechanical asphyxias ratio of 1:6), while drowning is more frequent in women (ratio of 1:1). In a postmortem analysis, assessing premeditation is rather complex; nevertheless, it has been reported that 58 (9%) subjects wrote a “suicide note” before dying. The average age of these subjects is lower than of the whole group. These data correspond to the known fact that premeditation is more distinctive of adulthood, while impulsivity is more typical of adolescents and young adult subjects. Marital status has been studied as well: the “never married” people (34%) were on average younger than the subjects of the entire case history (39 ± 17 years). The separated or divorced subjects were also relatively younger (49 ± 15 years). The correlation between employment and cause of death has been studied. A higher trend to use drugs to commit suicide has been observed in the “helping profession” and to use gunshot wounds in policemen and security guards. Surprisingly, this study detected a much lower percentage of mental illness than what is expressed in the literature. The subjects who suffered from depression are 189 (26%), alcohol abuse was reported in 30 individuals (4%), drug addiction in 23 subjects (3%), and psychosis in 21 subjects (~3%). It is important to point out, however, how these data could be potentially underestimated considering the difficulty of obtaining a certain diagnosis in the psychiatric field.

Conclusion: Although the above-stated aspects are clearly known in the literature, it is essential to continue monitoring them in their various realities, for the purpose of intervening with prevention campaigns. Forensic medicine, indeed, represents an essential discipline, not only for its legal implications, but also for its social and ethical connotations.

Reference(s):

¹. WHO (World Health Organization). 2014a. *Preventing Suicide: A Global Imperative*. Geneva: WHO.

Suicide, Retrospective Study, Manner of Death