SUICIDE EPIDEMIOLOGY DEPENDING ON SOCIO-CLIMATE CHANGES

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Abstract

Suicide is any situation in which death occurs as a result of a deliberate act committed by the victim [11]. Currently, the notion of suicide tends to be replaced by that of suicidal behavior. The latter includes: successful suicide, suicide attempt and suicide ideation. Suicide is a disease associated, in turn, with mental disorders such as depression, schizophrenia, bipolar disorder, alcohol dependence and other substances [12, 15]. Our study is a retrospective one, through which we followed epidemiological data on suicide over three generations, between 1982 and 2017, the case being taken from the region of Moldova (period 1982-1993) and later from Iasi County (1994-2017).

Keywords:

suicide, suicide risk, suicidal behavior, mental illness.

INTRODUCTION

The supreme vocation of a researcher is the knowledge that must be accomplished and put in the service of man. Plato still distinguishes conjunctural knowledge (opinion) from epistemic (sure) knowledge where the demonstration becomes absolute. Socrates' method was based on induction as man's ability to open the way to objective truth, regardless of

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the subjective concrete. Later, Aristotle showed the way to pass from opinions to truth through the postulate "adequatio rei intelectus", as an essential element of the logic of knowledge [1, 2]. This will be at the origin of Kant's later beliefs, for which the objectivity of knowledge depends on the science that operates with "epistemes" that give stability and solidity to the truth. Judgments based on possibility do not become apodictic if we do not have elements (criteria) to turn the possible into reality. Later Descartes based the logic of knowledge on 4 precepts:

• not to accept something as true if it was not known clearly and distinctly (in order not to have the opportunity to doubt);
• divide the research difficulties into as many parts as needed (to solve the topic better);
• to lead thoughts in order (from simple to complex);
• make complete enumerations and general revisions (so as not to omit anything).

Through the above postulates, Descartes laid the foundations of epistemology by elaborating the 11 known rules, among which:

• a method is needed to search for the truth;
• the truth must be clearly demonstrated, etc.

In the same sense, Kant and then Rickert lay the foundations of the logic of value (scientific logic of the spirit) and their selection according to epistemic principles (Camil Petrescu), culture being the ultimate goal of knowing nature.

This emphasizes the old Aristotelian principle, namely that "truth is the agreement of knowledge with its object" [5, 19].

MATERIAL AND METHOD

Our study is carried out over three generations, in the period 1982 - 2017 (35 years) comprising at the beginning (1982 - 1993) the cases in the region of Moldova (approx. 8 million inhabitants) and later (1994 - 2017) the cases in the county Iasi (approximately 800,000 inhabitants). A total of approximately 6800 cases were conducted, distributed approximately equally in urban and rural areas. But regarding the annual increase in the number of cases, we can show that if in 1994 we encountered 83 cases, in 2015 it
reached 143 cases, even if the population in this region decreased significantly by the departure of residents abroad.

**RESULTS:**

Our epidemiological data have an increased reliability because they are based on a correct assessment of the type of death. In this way, the epidemiological study of suicide appeared to us as essential as long as this phenomenon is inseparable from its physical, temporal and social environment [22, 27], thus, as an extension, as Vedrinne remarks [42] not being an individual but social phenomenon. That is why Durkheim [43] attributed the increase in the suicide rate at the end of the 19th century to the moral decline of the countries analyzed. Jaroszewski [44] also shows that after the fall of communism in Warsaw, economic difficulties made suicide 5 times more frequent. Both the mentioned studies and the current studies as well as our data on the analysis of suicide by regions, time, age, religion, size of localities, cohesion of the social group, etc. shows that suicide has an inverse proportional frequency, especially with the degree of interpersonal cohesion. All other factors, including mental illness, must be considered extrasocial, the psychobiological theses of suicidal determinism being considered, even by Durkheim, as a preconception. Durkheim's data that concluded that suicide is a sociological phenomenon are partially confirmed by our data, the comparison of suicide with murder revealing that the state of anomie becomes their common source, but without being able to neglect, from this determinism, the role of fragile personality and situational factors. Indeed, when the demands of the environment are weak and generate anomie, the frequency of the crime increases and vice versa, when the mesological demands are strong and the anomie decreases, the frequency of suicide increases. It is not excluded that the frequency of the crime (eg war) will provide an "immunity" for suicide.

Application of epidemiological methods to the study of suicide by studying 6800 cases encountered over a period of 35 years (1982-2017) (duration that is like a bridge on an important social factor that, environmental and criminological, makes the transition from a rigorously central society by multiple means, including fear, to another, in which the absence of values and social norms stand out) allows to have a true dynamic
of environmental factors in the genesis of the suicide attempt and in its realization.

It is observed, according to Scripcaru C. that if suicide had a low frequency on the territory of Moldova (on average 285 cases per year between 1982-1985), between 1986-1989 it registers a growth spurt of 363 on average per year, because, after 1989 to stabilize at an average of 362 cases per year. In the years 1988-1989 there were 703 S (32.4%) compared to 1990-1991 (30.1%) and 1992-1993 (37.5%). According to our study, in 1994, we registered a minimum value of 82 cases of suicide (10.2% oooo), in Iași county, with an increase until 2008 when we registered a maximum value of 149 cases of suicide (18.6% oooo), with a stagnation of the rate until 2012, followed by a slight decrease (Tables 1 and 2).
In relation to the geographical environment, there is a more frequency of cases in the counties in the process of rapid industrialization and implicitly of population migration, such as Galați (577 cases), Iași (588 cases), Bacău (415 cases), Neamț (469 cases), compared to areas still with a predominantly agricultural economic potential (Vaslui, 355 cases, Botoșani 409 cases). However, the territorial differences are insignificant, which allows us to assess the epidemiology of suicide as a phenomenon without significant changes in frequency in Moldova. As a percentage, 4 counties with agricultural predominance gave 37.1% of cases and the other 4 counties gave 62.9% cases.

- The relationship of suicide with murder, of self-aggression as the other side of heteroaggression, is of particular interest, our data trying to reveal their common behavioral origin as aggression.

- If we combine crime and suicide as two forms of the same aggression, the fact confirms the beginning of the outpouring of violence, put by criminologists on the weakening of social control, after 1990, as a consequence of the liberalization of frustrations accumulated over time and new causes of anomie, and which have disinhibited violent and
especially heteroaggressive self-behavior (lack of consensus on norms and traditions, decreased social control). Because the phenomenon deserves forensic and criminological analysis, in our opinion, the increase in aggression after 1990 could be explained by 3 factors:

- Decreased attachment to parental patterns following the frequent situation of unwanted child, family conjugopathy (frequency of cohabitation, couple alcoholism, etc.).
- The lack of employment of many people in stable activities and behaviors (school, cultural) hence the increase in unemployment, social dependence;
- Difficult restructuring of beliefs into fundamental and perennial values such as traditional, religious, property values, which prolong some conflicts between officially stated and individually perceived values.

Aggression is the quintessential expression of anomie, at a certain weakening of social control, noting a decrease in trust in law and authority, even with the generation of a delinquent subculture [26]. In fact, the accentuation of social control is necessary as a corrective to delinquency even in the most developed, civilized and democratic countries. Other variables of the epidemiological study were the frequency of suicide in relation to the environment, finding a frequency of 1354 cases in rural and 1013 cases in urban, 57.19% in rural and 42.81% in urban, with a maximum value of 53.22% in 2003 for the urban environment (Tables 3 and 4).
In all epidemiological studies on suicide, its frequency is reported according to the months of the year. Our data show a higher frequency of suicide in May, July and October, when 242, 242 and 240 cases per month were registered. The lowest frequency was registered in November-February, with values between 139-159 cases per month.
CONCLUSIONS

1. The reliability of the epidemiological data of the analyzed group results from the forensic scientific evaluation of the necropsy data, favored by the legal provisions.

2. Although in the world and in the transitional society there is an increase in the suicide rate due to economic difficulties and the moral decline of society, the data of the analyzed group do not show such a frequent increase, even in conditions where suicide cannot be dissociated from the physical, temporal and social context in which it occurs. This reveals a closer cohesion of the family group through the remanence of religious and cultural traditions towards life and death, existing in the population from which the analyzed group comes.

   This can be related to the finding that the suicide rate increases with well-being when people expect more from life, which through failure, leads to frustration and suicide, the suicide rate varying inversely with the stability of social relationships. Whenever the level of social integration is low, the suicide rate increases and vice versa.

3. The fact that geographically, in the analyzed territory, no significant differences in frequency are observed, gives the lot a unitary
character of study and reveals the relatively uniform role of the 
environmental conditions achieved by an excessive industrialization on 
account of rural areas.

4. The fact that 57% of the suicides committed occurred in rural 
areas, highlights the economic difficulties encountered by this category of 
population during the analyzed period.

5. Consistent with the data in the literature and in our analysis, 
suicide was 3 times more common in men than in women. The fact reveals 
that from a behavioral point of view, the man is more inclined to external 
and certain aggression, while the woman to internal and uncertain 
aggression, proves the much higher frequency of suicide attempts in women 
as an impulsive reaction to a conflict state especially family .

6. In the analyzed group, the suicide committed decreases with age 
(after 60 years) so that age does not appear “as an autonomous risk factor”, 
a fact that must be correlated with the vigor of conceptions and beliefs 
regarding suicide as a reprehensible religious sin.

7. The maximum frequency of suicide occurred in May, July, 
October, which may be correlated with the frequency and / or exacerbation 
of depressive states reactive to social, work and family conflicts, marital and 
probably also with the increase of strong alcohol consumption in warm 
weather conditions. These data also coincide with the higher frequency of 
suicide committed on Sunday, Monday and in the morning.

8. The general data analyzed assume that anomie is the common 
denominator (source) of current aggression, both self and heteroaggressive, 
which will be correlated during the study with the analysis of risk factors and 
personality traits of subjects.

9. The analyzed epidemiological data allow to hypothesize that the 
most effective model of prophylaxis of suicide risk (as well as aggression in 
general) is an integrative medical one, based on the evaluation of risk factors 
able to develop suicidal behavior (biological, psychodynamic factors , 
individual and social), from which to derive a primary prophylaxis (of the 
general standard of living and quality of life), secondary (prevention of 
aggression and implicitly of suicide in populations at risk) and tertiary 
(prevention of criminal recidivism, recidivism suicide attempt).
10. The epidemiological data resulting from the analyzed group reveal, from the beginning, the polymorphism of suicidal behavior that requires a multidimensional approach.

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