Original Article

Regional Scenario of Global Suicide

Vijayanath.V[(1)], Vijayamahantesh S.N.[(2)], Anitha. M.R[(3)], Raju .G.M[(4)]

1-Associate Professor, Department of Forensic Medicine & Toxicology, VMKV, Medical College & Hospital, Salem, Tamil Nadu

2-Associate Professor of Forensic Medicine, S.Nijalingappa Medical College, Navangar, Bagalkot, Karnataka.

3-Assistant Professor, Department of Anatomy, S.S.Institute of Medical Sciences & Research center, Davangere, Karnataka (India)

4-Associate Professor, Department of Forensic Medicine & Toxicology, S.S.I.M.S & R.C, Davangere, Karnataka (India).

***Corrosponding author*:** Vijayanath.V**,** MBBS, MD, DNB, MNAMS**,** Associate Professor**,** Department of Forensic Medicine & Toxicology**,** VMKV Medical College & Hospital.Salem.Tamil Nadu**,** E mail: drvijayanath@rediffmail.com

Abstract

Suicide is a serious public health problem. The World Health Organization (WHO) has recognizing the growing problem of suicide worldwide, urged member nations to address the phenomenon. As suicides continue to be a major burden , study of suicide is conducted over a period of 2-years that is from 1st January 2003 to 31st December 2004.

The psychological autopsy conducted, which have been reported in mortuary, here show clear evidence that most of poisonings were by Poisoning & Hanging. And most of victims were suffering from Physical and Psychiatric illness. Majority were illiterates and agriculturists. The special emphasis was made on time of committing suicide, which shows that 68.90% were day time only.

Key words: *Suicide, Psychiatric, illness*

Introduction

The word 'suicide' has its origin in Latin; "sui", of oneself and "caedere", to kill; the act of intentionally destroying one's own life. The phenomenon of suicide has at all times attracted the attention of moralists, social investigators, philosophers and scientists. The modern era of the study of suicide began around the turn of the 20th century, with two main threads of investigation, the sociological and the psychological, associated with the names of Emile Durkheim (1858-1917) and Sigmund Freud (1856-1939), respectively. Most sociologic research into suicide has followed the pioneer work of Durkheim who examined suicide rates in relation to social factors, concluding that the suicide rate in a given population varies according to the degree with which the individuals in that group are integrated and regulated by society. Psychodynamic explanations of suicide have focused on the role of aggression and the consequences to the suicidal individual's inner world of the internalization of frustrating or disappointing objects. Suicide ranks among the most tragic events in human life, causing a great deal of serious psychological distress among the relatives of the victim at the family level as well as great economic problems for the whole society in a statistical sense[1].

The World Health Organization, having declared that suicide was among the most important areas of public health, has been facilitating comprehensive

strategies for suicide prevention. Suicide is among the ten leading causes of death for all ages in most of the countries for which information is available throughout the world (WHO, 2004). Rates of suicide as high as 40.2 Per 1,00,000 population per year suicide per have been reported (Lithuania). On an average it can be reasonably estimated that during one year approximately some 4,00,000 people commit suicide around the world[2]. Nevertheless, there are many reasons to believe that suicide is underreported by 20% to 100% according to prevailing beliefs and negative sanctions attached to it, in many places. According to National Crime Records Bureau , as many as 1,18,112 persons committed suicide during 2006. According to; the recent report of the National Crime Records Bureau, Pondichery, 50.2 per 1,00,000 population, Karnataka, 21.7 per 1,00,000 population[3]. The fact that every sixth minute a person commits suicide in the country has raised questions about the reasons behind this drastic step.

Keeping the above statistics in mind the study of Regional scenario of global suicide was undertaken (2003-2004) at Gulbarga region to know the commonest type of mode adopted for suicide & causative factors suicide.

Material and methods

A total of 119 suicide cases were studied over a period of two years which were brought to the Government general hospital Gulbarga. Cases having clear cut evidences of suicide were included in the study by studying the hospital admission papers if any, inquest papers and post mortem reports.

A psychological autopsy was done by gathering the information from family members friends of the deceased to know the various precipitating factors for the suicidal act committed.

Results

Distribution of Cases according to Precipitating Factor for suicide

Precipitating factors	Male	Percent	Female	Percent	Total	Percent
Physical illness	21	17.67	11	9.25	32	26.92
Psychiatric illness	09	7.56	11	9.24	20	16.80
Loan/ Poverty	15	12.60	02	1.68	17	14.28
HIV/ AIDS	04	3.36	01	0.84	05	4.20
Torture/ Dowry related	02	1.68	06	5.04	08	6.72
Failure in Exams	06	5.04	--	--	06	5.04
Domestic problems	08	6.72	05	4.20	13	10.92
Drug addiction	02	1.68	--	--	02	1.68
Death of family member	04	3.36	--	--	04	3.36
Frustration in life	05	4.20	--	--	05	4.20
Unknown	06	5.04	01	0.84	07	5.88
	82	68.90	37	31.10	119	100.00

The precipitating factors for Suicide, majority are having physical illness 32 (26.92%) followed by psychiatric illness 20 (16.80%).

Relation between Education and Occupation in suicide cases

Education	Occupation						Total	Percent
	House work	Agricu-lture	Employed	Student	Business	Unknown		
Illiterate	15	35	--	--	03	--	53	44.56
Primary	05	02	01	05	03	--	16	13.44
Higher secondary	04	--	04	12	03	--	23	19.32
Graduate	01	--	11	05	02	--	19	15.96
Post graduate	--	--	--	01	--	--	01	0.84
Unknown	--	--	--	--	--	07	07	5.88
Total	25	37	16	23	11	7	119	
Percent	21.00	31.12	13.44	19.32	9.24	5.88		100.00

Relation between time and sex-wise distribution in suicide cases

Time-wise	Male		Female		Total	
	No.	%	No.	%	No.	%
Day (6.00 AM to 6.00 PM)	52	43.70	30	25.20	82	68.90
Night (6.00 PM to 6.00 AM)	28	23.52	07	5.88	35	29.42
Unknown	02	1.68	--	--	02	1.68
Total	82	68.90	37	31.10	119	100.00

Discussion

Methods of ascertainment of the cause of death, as well as the reporting patterns including persons legally authorized to report deaths from suicide are variable from country to country.

Prevailing social, cultural and religious attitudes contribute to hiding, non-reporting and under-reporting of fatal as well as non-fatal suicidal behavior. It is assumed that the official suicide rates under estimate the true rates by 20% to 100%.

Statistics of attempted suicides, also referred to as 'Para - suicide and deliberate self-harm' (DSH) are generally not available officially. Researches by mental health professionals in various countries and with high suicide rates i.e., rates above 30per 100,000 include certain Eastern European countries such as Lithuania, Estonia, Latvia and Belarus, the Russian Federation, Finland, Hungary and Sri Lanka in South East Asia. Countries with suicide rates lower than 4 per 100,000 consist of certain Islamic countries such as Kuwait, Iran, Egypt etc and Asian countries such as Philippines and Azerbaijan. Although part of the variation in suicide rates between countries may be due to variable standards and regulations of the suicide reporting systems and data collection in different countries, it is generally accepted that there are indeed true differences in suicide rates between countries and regions across the world.

Comparison of Suicides in Region (India) with rest of the World

Epidemiological analysis of suicides show that suicidal phenomena in India is different from those occurring in the rest of the world, particularly, the West, on at least 5 counts-

1. Age:

One of the classic observations in epidemiology of suicide is the predominance of suicides among the elderly and the general tendency for suicide rates to increase with age. There is a shift in the predominance in the number of suicides from the elderly to younger people all over the world. However, this is most noticeable in India. More than 65% of all suicides are committed by persons below 35 years of age in India. About 35% is committed by persons between the ages of 15 and 24 years. Only 7% of suicides are committed by persons aged 60 years and above.

2. Gender:

All over the world suicide rates are consistently higher in males than rates in females. In fact, data from across the world show that the ratio of male female suicides rates ranges from 3:1:1 to 10.5:1. Globally, the only exception for this observation is rural China. The ratio is vastly different in India too. The male female ratio in India is 1.4:1. When one looks at the ratio in regard to females below the age of 25 years, there is a reversal of the ratio and it is 1:1.4. In the present study also there a male preponderance over the female with male contributing 68% of total cases. These findings are consistent with the studies conducted by Sidsel Rodge Sidsel et al 4, Heittiarachchi et al[5]and Le Comte et al[6] where as study by ponnudurai[7] et al shoes female preponderance.

3. Marital Status

Most suicides recorded from the West indicate that being in a stable marital relationship is generally a protective factor against suicide. Being divorced, separated, widowed, or being in a single status are considered to be risk factors for suicide. In India

more than 65% of persons who committed suicide were married. It is instructive to note the relationship of marital status in India and USA. In USA only 11% of persons who committed suicide had "married" marital status. The percentages for divorced and widowed were 5% and 6% in India, while they were 33% and 21% respectively in USA.

4. Choice of Method

Guns are used in 2 / 3rd of all suicides in the USA. In most other parts of the world, use of gun is the second most widely preferred choice. Western literatures also show that women generally tend to adopt "softer" methods such as consuming poison. In India use of guns for suicide is rather infrequent. Poisoning, hanging and burning are popular choice in India, particularly with women.

*5. T*ime of suicide

In our study most of the suicide were committed in day time between 6 AM and 6 PM which accounted for 68.9% of the cases. This could be due to the fact that in this time the victims were alone at home when others in the family had for gone for their work. This is similar to the study conducted by He et al[8] in which 64% of victims committed suicide in an interval between 7AM and 7 PM.

6. Association with Mental Disorders

Western literature reports that about 90% of all those who commit suicide suffer from a psychiatric disorder. A recent systematic review conducted by Jose Bertolote of W.H.O. (Bertolote and Fleischmann 2002) found that "98% of those who committed suicide had a diagnosable mental disorder". While this may be true in the West, our study showed that a specific mental disorder was documented 16.8% of the subjects. Regular and problematic alcohol usage was recorded in about 15% of the males who committed suicide.

Psychiatric illness was the most common cause for suicide in the study conducted by Sidsel Rodge Sidsel et al 5, Heittiarachchi et al[6], Le Comte et al[7] and Ponnudurai R et al[8] having 52%, 38%, 90% and 20% respectively. In our study, psychiatric illness was the reason for suicide in 20 cases i.e., 16.8%.

Our study also showed that nearly 90% of those who committed suicide belonged to the lower and middle socio-economic strata and majority were illiterate. Persons with physical illnesses, various stressful life events, economic factors, unemployment and disturbed interpersonal relationships were important causative factors. It was also noticed that the causative factors were combined, cumulative and were inter-related to one another. Many of the stressors were unresolving in nature. Several of the suicides were of the 'impulsive type' and were committed within hours of some triggering factor.

Currently available data show that suicidal phenomena, which occur in India, are different from the West in a variety of ways. These observations are of great relevance in planning suitable and meaningful suicide prevention strategies in India. It is generally agreed that preventive action should be collective and coordinated, inter disciplinary, multi-sectoral and based on scientific evidence.

In most of the studies the importance to committing suicide was not mentioned, here an attempt to show the occurrence of suicide, which shows that about 68.90% were day time only.

References

1- Sadock BJ, Sadock VA. Kaplan & Sodock's Comprehensive Textbook of Psychiatry 8 th edition.

2005. Lippincott Williams & Wilkins

2- http://www.maithrikochi.org/india_suicide_stastics.htm#state_rate.

3- http://in.glue.yahoo.com/page/national%20crime%20records%20bureau.

4- Rodge Sidsel, Hougen PH, Poulsen K. Suicides in two Scandinavian Capitals – A Comparative Study. Forensic Science International, 1996; 80: 211-219.

5- Heittiarachchi J, Kodithuwakku GC, Chandrasiri N. Suicide in southern Sri Lanka. Medicine, Science & Law 1988; 28(3): 248-251.

6- LeComte D, Fornes P. Suicide among youth & young adults, 15 through 24 years of age – A report of 392 cases from Paris 1989-1996. Journal of Forensic Science 1998; 43(5): 964-968.

7- Ponnudurai R, Jeyakar J. Suicide in Madras. Indian Journal of Psychiatry, 1980; 22: 203-205.

8- Xiao-Yan He et al. Factors in prison suicide – one-year study in Texas. Journal of Forensic Sciences, 2001; 46(4): 896-901.