



“A STUDY OF SUICIDE IN NAGPUR WITH RESPECT TO DEMOGRAPHIC PROFILE AND METHOD ADOPTED FOR SUICIDE.”

Forensic Medicine

Dr. Dinesh S Akarte*

Assistant professor Forensic Medicine, Govt. Medical College, Nagpur, Maharashtra, India 440003 *Corresponding Author

Dr. M. S Vyawahare

MD Professor Forensic Medicine, Govt. Medical College, Gondia, Maharashtra, India

Dr. Nitin S Barmate

MD Assistant professor Forensic Medicine, Govt. Medical College, Nagpur, Maharashtra, India 440003

ABSTRACT

'Suicide is characterized as the final common pathway of diverse circumstances, of an interdependent network rather than an isolated cause, a web of circumstances tightening around a single time and space¹. The maximum number of suicide in young adult (20-40years) may be attributed to various factor. Victim who belongs to upper lower class which constitutes 50.33% of cases followed by lower class (17.67%), Most of the suicides were seen in unemployed (26%), of which 16% (i.e.46.15% out of total of total female) were housewives followed by students (18.33%)..

KEYWORDS

Suicide, Unemployed, young adult, hanging and poisoning.

INTRODUCTION

'Suicide is characterized as the final common pathway of diverse circumstances, of an interdependent network rather than an isolated cause, a web of circumstances tightening around a single time and space¹. As per National crime record bureau data in the year 2013, the total unnatural death was 5,68,517 out of which 33,201 cases are of homicide, 4,00,517 cases of accident and 1,34,799 cases was of suicide respectively. It indicates that homicide account for 5.84%, accident 70.45% and suicide 23.72% respectively. This indicates that suicide is second most common cause of unnatural death. Out of all the suicide in India Maharashtra accounts for 12.33%, of which 523 suicides occur in study region accounting for 3.1 % of total suicide in Maharashtra and 0.38% of suicide in India. This indicates that Maharashtra has maximum suicidal load all over the India.

The means adopted for committing suicides varies from easily available and less painful such as hanging, poisoning and drowning to more painful means such as self inflicted injuries, burning and shooting etc. In the year 2013 out of total suicide hanging accounted for 39.8%, poisoning 27.9%, Self-Immolation 7.4% and drowning 5.7% were the prominent means of committing suicides.²

The present study was performed to evaluate the various aspects of suicidal deaths in this region which may help the society to reduce the rate of suicide.

MATERIAL METHOD

The study was carried out in the Department of Forensic Medicine Government Medical College and Hospital, Nagpur. A prospective study was conducted from Jan 2013 to nov2014. Various information was collected from inquest papers, autopsy report, information from relative, police, chemical analysis reports and treatment record. The data were analysed by using analysed and tabulated in Microsoft Excel software packages.

Inclusion criteria

All the dead bodies brought to department of forensic medicine for medico- legal autopsy with history of suicidal death.

Exclusion criteria

1. Unknown, unclaimed dead bodies.
2. Dead bodies known but no relatives available.
3. Cases where the manner of death is doubtful.

Cases where the proper history about all the assessing parameters taken in study could not be elicited from investigating officers and relatives.

Result-

TABLE ON 1- SHOWS SUICIDE WITH RESPECT TO AGE

Sex	Number of cases	% of cases
Male	196	65.34
Female	104	34.66
Total	300	100%

Table No. 1- shows that out of total 300 cases, 196 were male and 104 were female. Male two times of outnumber the female .

TABLE NO: 02 SHOWS THE SUICIDAL DEATHS WITH RESPECT TO AGE.

Age	Sex				Total	%
	Male	%	Female	%		
Child (0-12)	0	0	0	0	0	0
Adolescent (13-19)	11	3.67	22	7.33	33	11
Young adult (20-40)	106	35.33	67	22.33	173	57.67
Adult (41-64)	46	15.33	13	4.33	59	19.67
Older 65 or above	33	11	2	0.66	35	11.66
Total	196	65.33	104	34.67	300	100

TABLE NO: 3 DISTRIBUTION OF SUICIDAL DEATHS AS PERSOCIOECONOMIC STATUS

Social class	Male		Female		Total	
	Cases	%	Cases	%	Cases	%
Lower class	33	11	20	6.67	53	17.67
Upper lower class	104	34.67	47	15.66	151	50.33
Middle class	25	8.33	15	5	40	13.33
Upper middle class	22	7.33	14	4.67	36	12
Upper class	12	4	8	2.67	20	6.67
Total	196	65.33	104	34.67	300	100

Upper lower class constitutes 151(50.33%) cases, of which 104(34.67%) cases were males while 47(15.66%) cases were females

TABLE NO 4 :DISTRIBUTION OF SUICIDAL DEATHS AS PER OCCUPATION

Occupation	Male		Female		Total	
	Cases	%	Cases	%	Cases	%
Unemployed	27	9	51	17	78	26
Student	27	9	28	9	55	18.33
Labourer	49	16.33	5	1.67	54	18
Farmer	23	7.67	2	0.67	25	8.33
Private Service	15	5	7	2.33	22	7.33
Govt. service	13	4.33	6	2	19	6.33
Private business	42	14	5	1.67	47	15.67
Otal	196	65.34	104	34.67	300	100

Maximum suicides were seen in unemployed (26%), followed by students (18.33%), and least cases of suicide found in government service (6.33%). Out of total 78 unemployed maximum cases found in were housewives which accounts for 46.16% of total females.

TABLE NO: 5 DISTRIBUTION OF SUICIDAL DEATHS AS PER LOCALITY

	Male		Female		Total	
	Cases	%	Cases	%	Cases	%
Urban	161	53.67	80	26.66	241	80.33
Rural	35	11.67	24	8	59	19.67
Total	196	65.34	104	34.67	300	100

Maximum cases of suicidal deaths urban area constitutes 241 (80.33%) cases, of which 161(53.67%) cases were males while 80(26.66%) cases were females. Rural areas constitute 59(19.67%) cases, of which 35(11.67%) cases were males while 24(8%) cases were females.

TABLE NO: 6 DISTRIBUTION OF SUICIDAL DEATHS WITH RESPECT TO EDUCATION

Education	Male		Female		Total	
	Cases	%	Cases	%	Cases	%
Illiterate	13	4.34	11	3.66	24	8
Up to 7th std.	60	20	14	4.67	74	24.67
8 – 12 std.	70	23.33	54	18	124	41.33
Graduate	45	15	19	6.33	64	21.34
Post graduate	8	2.66	6	2	14	4.66
Total	196	65.34	104	34.67	300	100

Maximum cases of suicidal death in victims who were educated up to 8-12 standard constitutes 124(41.33%) cases, of which 70(23.33%) were males while 54 (18%) cases were females. While minimum cases found in postgraduate constitute 14 (4.66%) cases, of which 8(2.66%) cases were males while 6(2%) cases were females.

TABLE NO: 7 DISTRIBUTION OF SUICIDAL DEATHS WITH RESPECT TO METHOD OF COMMITTING SUICIDE

Method	Sex				Total	%
	Male		Female			
Hanging	85	28.34	30	10	115	38.34
Poisoning	71	23.67	30	10	101	33.67
Burns	15	5	33	11	48	16
Drowning	22	7.33	11	3.67	33	11
Railway cutting	2	0.66	0	0	2	0.66
Firearm	1	0.33	0	0	1	0.33
Total	196	65.33	104	34.67	300	100

Maximum cases committed suicide by Hanging constitutes 115(38.34%) cases, of which 85(28.34%) cases were males whereas 30(10%) were females. While minimum cases of committing suicide by firearm which constitute 1 (0.33%) cases.

Discussion

In spite of its wider perspectives, the aetiology of suicide is ill understood. In the modern civilized society, suicide in general terms has always been designated as a cowardly and shameful act, even though it is viewed with sympathy in minor proportion of circumstances. A proper understanding of these etiological aspects with respect to the practising area is a prerequisite for suicide investigation.

Age

In the current study out of total 300 cases, maximum number of cases were of young adults (20-40 years). Not a single case of suicide was seen in children (0-12 years).

Our study is in accordance with studies of Rane A et al³, Tanna JA et al⁴, Kadu SS et al⁶, Sahoo Bardale et al⁵, Singh P et al⁷, Gururaj G⁸, Elfawal MA⁹, PC et al¹⁰, R. Auer Med¹¹, Ponnudurai et al¹².

The maximum number of suicide in young adult (20-40 years) may be attributed to various factors such as: - Prevalence of psychiatric risk factors in youth especially conduct disorder, substance abuse or depression, a higher proportion of youth in society resulting increase competition for educational access or job opportunities and if not

fulfilled may result in sense of hopelessness or depression in them and change in family structure.

Socioeconomic status –

Victim who belongs to upper lower class which constitutes 50.33% of cases followed by lower class (17.67%), middle class (13.33%), upper middle class (12%) and upper class (6.67%) cases respectively. Present study is in accordance with Tanna JA et al⁴, Kadu SS et al⁶, and Auer Med¹¹.

The high rate of suicide among lower class could be due to financial and health problems. Because of low income, an individual cannot fulfil the daily needs of family. Lower socioeconomic status is linked to domestic crowding, a condition which has negative consequences for adults and children, including higher psychological stress and poor health outcomes. They are associated with many addiction (cigarette smoking) and engaging in episodic heavy drinking.

Occupation

Most of the suicides were seen in unemployed (26%), of which 16% (i.e. 46.15% out of total of total female) were housewives followed by students (18.33%). Current study is in accordance with NCRB², Rane A et al³, and Gururaj G et al⁸. B. L. Meel¹³

In our study unemployed and housewife accounts for maximum number of suicide. Unemployed males frequently face debts, family pressure for earning and consequent mental stress etc. Males are supposed to earn for the family and if he remains unemployed there is tremendous mental pressure on him to earn, so males are more prone for suicide.

Locality

Maximum suicide (80.33%) were in the people living in urban areas while people living in rural areas constituted (19.67%) cases. Our study is in accordance with Rane A et al³ who found that most of the suicide persons were from an urban background (70%), rural areas (10%) and suburban areas (20%).

It has been proposed that the risk of suicide in general population increases progressively with increasing degree of urbanicity of the living place.

Education

In present study most of the victims, i.e. 41.33% cases were educated up to 8-12 standard followed by 24.67% cases up to 7th standard, 21.34%. Current study is in accordance with Tanna JA et al⁴, Kadu S et al⁶, Gururaj G et al⁸ and Chandrashekar TN¹⁴.

Suicide is more prevalent in persons with low education level attributed to many factors such as low income and unstable job to these persons. Hence, such persons whether male or female with low education level are always vulnerable for committing suicide.

Method use and age

In present study the method used by young adult (20-40) years for committing suicides was commonly hanging (20.66%) closely followed by Poisoning 60(20%), Burning (10.33%), Drowning (6%), Railway cutting (0.33%) and Firearm (0.33%) respectively. These all form of suicide were most common in Young adult (20-40) years of which hanging and poisoning contributed almost equally.

Current study was in accordance with NCRB², Rane A et al³, Bardale et al⁵, R. Elfawal MA⁹, Sahoo PC et al¹⁰, Ponnudurai et al¹², B. L. Meel¹³, and Keith Mant¹⁵.

The main reasons for people choosing hanging as the most common method of committing suicide are easy availability of ligature material, simple procedure, immediate, painless and surety of death. Poisoning was second common method of committing suicide after hanging due to the fact that it is easily available and no strict legislation for acquiring poison. Suicide by firearm is least commonly encountered method which may attribute to factors like less accessibility, high cost and strict law enforcement in both regard to possession and usage of firearms.

Summary and Conclusions

Maximum number of cases was in young adult (20-40 years). Males nearly two times outnumbered the females. Majority were belonging

to upper lower class which constituting 50.33% cases followed by lower class 17.67% cases Maximum suicides were unemployed (26%) cases. Overall most common method for committing suicide was hanging (38.34%) cases followed by poisoning (33.67%) cases.

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