

Pattern of Suicidal Deaths in Belagavi: Retrospective Study

Saraswathi N.¹ Keshava H.B.², Ashok Kumarshetty³

¹Assistant Professor, Department of Psychiatry, Belagavi Institute of Medical Sciences, Belagavi, Karnataka, India,

²Assistant Professor, Department of Forensic Medicine and Toxicology, Belagavi Institute of Medical Sciences,

Belagavi, Karnataka, India, ³Professor and Head, Department of Forensic Medicine and Toxicology, Belagavi Institute of Medical Sciences, Belagavi, Karnataka, India

Abstract

A retrospective study was undertaken over a period of 3 years to find out pattern of suicidal deaths in Belagavi. Autopsied at BIMS Hospital, a referral District hospital catering to the needs of public within a radius of 150 km. Out of 2200 autopsies conducted, 670 were suicidal deaths.

The commonest age group of victims were 21-40 yrs. Males predominated females in the ratio of 3:1. Maximum number of victims belonged to rural area. Majority of the victims were married. Common mode of suicide was poisoning. Maximum victims were brought dead. Maximum numbers of victims were farmers. Depression was the commonest cause for suicide.

Keywords: Suicidal deaths, rural area, poisoning, depression.

Introduction

Suicide is defined as an act in which a person intentionally causes his/her own death. Attempt to die by suicide is defined as a nonfatal and self injurious behaviour with an intent to die.

The word "suicide" was first used by the English author, Sir Thomas Browne in 1642 in his treatise "Religio Medici". The word originated from SUI (of oneself) and CAEDES (murder).

According to the data from the World Health Organization, every year, more than 800,000 people die from suicide worldwide. Most concerning observation seen in the last two decades is the increasing rate of adolescent and youth suicide attempts and deaths in many regions of the world, including India¹. Eighty five percent of suicides in the world occur in low and middle income countries. India being one among them suffers considerably from this burden.

Common causes for suicides include problems in interpersonal relationships, family conflicts, domestic violence, academic failure, unemployment, bankruptcy in business, loneliness, medical ailments, poverty and other stressful life events.

The objective of this study is to know the pattern of suicidal deaths in relation to age, sex, marital status, occupation, survival period, mode used for suicide and causes for suicide.

Materials and Method

All suicidal deaths autopsied at BIMS Hospital, Belagavi from January 2017 to December 2019 form the material for the study. During this period out of 2200 cases, 670 were suicidal deaths.

Data was obtained from hospital case records and police inquest reports. A proforma was evolved to get uniform information from all the above mentioned sources.

Observation and Results

The total number of autopsies conducted during this period is 2200 out of which 670(30.45%) were due to suicidal deaths.

Corresponding Author:

Dr. Saraswathi N.

Assistant Professor, Department of Psychiatry, Belagavi Institute of Medical Sciences, Belagavi, Karnataka, India-590001

e-mail: saruarvind98@gmail.com

The commonest age group of victims were 21-40 yrs(53%). Male predominated females in the ratio 3:1.

Poisoning was the most common mode used for suicide (49%).

Maximum number of victims were brought dead (49%).

Majority of victims were married (69%).

Maximum number of victims were farmers (27%)

Maximum number of victims belonged to rural area (66%).

Depression was the commonest cause for suicide (26%).

Suicides were more commonly seen in the month of March and April.

Maximum number of victims were Hindus (92%).

Results and Discussion

Table 1. Age-group and gender-wise distribution

Age Group	Male	Female	Total	Percentage
0-20	43	39	82	12.20%
21-40	86	271	357	53.20%
41-60	21	151	172	25.60%
61-80	11	44	55	8.20%
> 81	1	5	4	0.60%
Total	508	162	670	

Table 2. Method used for committing suicide

Method	Male	Female	Total	Percentage
Poisoning	251	77	328	48.90%
Drowning	25	8	33	4.90%
Burns Injury	13	14	27	4%
Hanging	209	63	272	40.59%
Gun Shot Injury	1		1	0.14%
Railway Track	7		7	1.04%
Acid Poisoning	2		2	0.29%
Total	508	162	670	

Table 3. Distribution of marital status

Marital Status	Total	Percentage
Married	459	68.51%
Unmarried	178	26.57%
Seperated	33	4.93%
Total	670	

Table 4. Distribution of occupation

Occupation	Male	Female	Total	Percentage
Farmer	180		180	26.86%
Students	71	43	114	17%

Occupation	Male	Female	Total	Percentage
Housewife		105	105	15.67%
Business	55		55	8.20%
Daily Wage Labourers	110	1	111	16.56%
Doctor	1		1	0.40%
Unemployed	91	13	104	15.52%
Total	508	162	670	

Table 5. Causes for committing suicide.

Causes	Male	Female	Total	Percentage
Alcohol Addiction	112	0	112	16.72%
Business Loss	10	0	10	1.49%
Physical Health Issues	16	24	40	5.97%
Crop Failure	66	0	66	9.85%
Depression	108	65	173	25.82%
Domestic Violence	1	22	23	3.43%
Exam Failure	23	19	42	6.27%
Financial Loss	62	0	62	9.25%
Impulsive Behaviour	2	7	9	1.34%
Mental Illness	9	3	12	1.79%
Not Known	99	22	121	18.06%
Grand Total	508	162	670	

Table 6. Year and month wise distribution of suicide deaths

Year	2017	2018	2019	Total
January	26	18	19	63
February	13	19	15	47
March	18	33	14	65
April	21	24	28	73
May	17	28	22	67
June	18	21	19	58
July	14	9	25	48
August	15	16	12	43
September	17	18	20	55
October	17	22	15	54
November	21	21	18	60
December	10	17	10	37
	207	246	217	670

Discussion

Today's world has become a roller coaster ride of unwanted competition and undue stress among people

of all generations. We see an unhealthy social structure growing in our society where people become judgemental of other people. Stress is seen at all the generations, from

a child to an elderly person. Children face competitive and comparison stress sometimes from parents, teachers or their friends. Some children go through traumatic experiences of sexual/physical abuse. As they reach their teenage the stress of being the best in their curricular/sports activities increases. The elders are not far behind in facing stress. They face stress in their job, in fulfilling family requirements, financial burden, etc. The senior citizens too face age related health problems, loneliness, lack of finance, etc. And when they find no ear to listen to their pain they chose to surrender their life.

Death by suicide is an extremely complex issue that causes pain to the victim and the ones they leave behind. The suicide rate in India is 16.5 per 100,000 people, the highest in South East Asia. Suicide is the second leading cause of death among the age group 15-29 years, claiming 200000 lives in 2016 worldwide.²

The Global Burden of Disease Study 1990 – 2016 – NCBI, India's contribution to global suicide deaths increased from 25.3% in 1990 to 36.6% in 2016 among women, and from 18.7% to 24.3% among men.³

According to present study, male predominated females in the ratio 3:1, which is contrast to the study conducted by Joseph et al 2003, in which the commonest method of suicide was poisoning followed by hanging which is consistent with our study.⁴

As per Aaron et al 2004, the commonest method of suicide was hanging which is contrast to present study. In our study the commonest is poisoning.⁵

As per Khan et al 2005, the commonest age group was 15-35 years which is almost consistent with our study where the age group is 21-40 yrs. Rural and married people are more affected in our study which is contrast to their study where unmarried and urban people were more affected.⁶

As per Abraham et al study 2005, the commonest method of suicide was hanging followed by poisoning which is contrast to our study where the commonest method was poisoning followed by hanging.⁷

As per Gajalakshmi et al 2007, male to female ratio is 1:1 but in our study the ratio is 3:1 which is contrast, and the commonest method was poisoning followed by hanging which is consistent with our study.⁸

As per study conducted by Chavan et al 2008, commonest method was hanging followed by poisoning,

male female ratio is 1:1, maximum victim belonged to urban area which is in contrast to our study.⁹

As per study conducted by Ashok Kumar Shetty, the commonest age group was 21 – 30 years, males predominated females in the ratio 2:1, poisoning was the commonest mode used for suicide, majority of victims were married, maximum victims belonged to rural area which is consistent with the present study.¹⁰

Prevention: Prevention requires a comprehensive approach that occurs at all levels of society—individual, family and community level.

A comprehensive national plan needs to be developed focussing the overall requirements of an individual physically and mentally. The national plan should include Economic plans to strengthen household financial security and include mental health coverage in health insurance. Early identification and treatment of mental health disorders like depression. Creating of employment opportunities for the youth and training them with the necessary soft skills. Reducing easy availability and access to pesticides, strict rules to be made for purchase of alcohol and life threatening medicines. Making availability of mental health care at the primary level by appointing medical practitioners/faith healers specially for counselling and treatment even at the rural areas.

Ethical Clearance: Taken from Institutional Ethics committee, BIMS Belagavi.

Source of Funding: Self

Conflict of Interest: Nil

References

1. World Health Organization. Preventing Suicide: A Global Imperative. Geneva: World Health Organization; 2014. Downloaded from www.who.int/suicide-prevention/world-report-2014.
2. Han B, Kott PS, Hughes A, McKeon R, Blanco C, Compton WM, et al. Estimating the rates of deaths by suicide among adults who attempt suicide in the United States. *J Psychiatr Res* 2016;77:125 - 33.
3. Gender differentials and state variations in suicide deaths in India: the Global Burden of Disease Study 1990–2016. India State-Level Disease Burden Initiative Suicide Collaborators†*The Lancet Public Health* Volume 3, Issue 10, October 2018, Pages e478-e489

4. Joseph A, Abraham S, Muliyl JP, George K, Prasad J, Minz S, et al. Evaluation of suicide rates in rural India using verbal autopsies, 1994 - 9. *BMJ* 2003; 326:1121 - 2.
5. Aaron R, Joseph A, Abraham S, Muliyl J, George K, Prasad J, et al. Suicides in young people in rural southern India. *Lancet* 2004;363:1117 - 8.
6. Khan FA, Anand B, Devi MG, Murthy KK. Psychological autopsy of Suicide - a cross - sectional study. *Indian J Psychiatry* 2005; 47:73 - 8.
7. Abraham VJ, Abraham S, Jacob KS. Suicide in the elderly in Kaniyambadi block, Tamil Nadu, south India. *Int J Geriatr Psychiatry* 2005;20:953 - 5.
8. Gajalakshmi V, Peto R. Suicide rates in rural Tamil Nadu, south India: Verbal autopsy of 39 000 deaths in 1997 - 98. *Int J Epidemiol* 2007; 36:203 -7.
9. Chavan BS, Singh GP, Kaur J, Kochar R. Psychological autopsy of 101 suicide cases from northwest region of India. *Indian J Psychiatry* 2008; 50:348.
10. Ashok Kumar Shetty .Incidence of Suicides in Belgaum, Karnataka. *Medico – egal Update*, Vol. 10, No. 1, Jan – Jun 2010; 19 – 20.