

Pattern of Suicides during COVID-19 Pandemic among Autopsies Conducted at Tirupati, Andhra Pradesh: A One-Year Retrospective Study

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Abstract

Background: COVID-19 pandemic is a global challenge. It's just not limited to physical impact but also has serious mental, social and economic impacts all over the world. Self-harm and suicides are its extreme effects.

Aim: To study and analyze the patterns of suicide during the COVID-19 pandemic.

Materials and Methods: A retrospective autopsy-based analysis of suicidal deaths occurred during March 2020 and February 2021 was conducted in the department of Forensic medicine, Sri Venkateswara Medical College, Tirupati. A total of 897 autopsies were conducted, out of which 248 were suicides.

Results: 248 cases of suicide were studied among them 182 were male and 66 were female. Majority of the deaths were due to hanging (94, 37.90%) followed by poisoning (61,24.59%). The most important contributing factor for suicide was domestic conflict/ violence (85,34.27%) followed by financial loss or loss of income (81,32.66%).

Conclusion: This study reemphasizes the need of proactive responses to psychological health especially during events of stressful conditions like lock down and pandemic. Social, economic and public health response is necessary to prevent suicidal behavior.

Keywords: Suicide, COVID 19 pandemic, Lockdown, Hanging, Domestic conflicts.

Introduction:

The coronavirus pandemic is a global challenge. It had damaging effects on health, social and economic aspect of life all over the world.

The increasing number of infections and uncertainty induces substantial fear and concerns

leading to stress and the anxiety, which was superimposed by lockdown restrictions, financial breakdown, lack of physical contact with other family members and friends.¹ There is a pervasive awareness of uncertainty over the future and an understanding that the pandemic is far from over. The psychological sequelae of pandemic will probably persist for

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months and years to come. These psychological sequelae often spread their ugly wings in all aspects with suicides being the final outcome.

Many people are migrating to villages because of absence of work and wages in cities.

Suicides and self-harm are a serious public health problem; however, it is preventable with timely, evidence based and often low-cost interventions. Multiple cases of COVID-19 related suicides in the USA, UK, Italy, Germany come up Bangladesh, India and other countries have been reported in mass media and psychiatric literature.

Globally, 7,03,000 people die by suicide every year and more than one in every 100 deaths (1.3%) in 2019 were the result of suicide². In the Indian context, NCRB data suggest that 1,53,052 suicides were reported in 2020 as compared to 1,39,123 suicides in 2019. The rate of suicides have increased by 8.7% during 2020 over 2019³.

The objective of this autopsy-based study is to provide an overview of prevalence and analyze the pattern of suicide during COVID-19 pandemic in order to help devise strategies to support the vulnerable groups. It will also help in taking concrete measures to prevent such unnatural and untimely deaths in the future.

Materials and Methods

This is a retrospective postmortem-based study conducted in the department of Forensic medicine and Toxicology, Sri Venkateswara Medical College, Tirupati. Data in relation to the deaths occurred during March 2020 and February 2021 was collected from inquest reports, hospital case sheets, autopsy reports and toxicology reports. Detailed history and information regarding the deaths was also gathered from deceased's close relatives' friends and police.

A total of 897 postmortem examinations were conducted during this period, out of which 248 deaths were suicidal and included in this study.

To ensure consistency and uniformity, data was collected in a predesigned standard proforma. It was tabulated, analyzed meticulously.

Results

A total of 248 cases were studied and among them 182 (73.38%) were male and 66 (26.61%) were female. Majority of the study population belonged to 21 to 30 years age group (126, 50.8%)(Table 1). Of the study population, 236 (95.16%) were known and 12 (4.83%) were unknown. Marital status revealed that 196 (79.03%) were married and 40 (16.12%) were unmarried. Marital status was not known in 12 (4.83%) of cases (Table 2). Majority of the deaths occurred at home (99, 39.9%) followed by farm/ field (73, 29.43%) (Table 3). Hanging (94, 37.90%) was the most common method of suicide followed by poisoning (61 24.59%) and drowning (42, 16.93%) (Table 4). Laborers/daily wage workers (79, 31.58%) were the most affected followed by self-employed people (50, 20.16%). The most important contributing factor for suicide was domestic conflict/ violence (85,34.27%) followed by financial loss or loss of income (81, 32.66%). Probable reason was not known in 12 cases (4.83%) (Table 5).

Table 1: Age wise distribution of suicidal cases.

Age group	Male	Female	Total
0-10	0	0	0
11-20	3	6	9
21-30	93	33	126
31-40	47	16	63
41-50	19	6	25
51-60	11	3	14
61-70	8	2	10
> 70	1	0	1
	182	66	248

Table 2: Distribution of cases according to Identity and Marital status

Identity status	Male	Female	Total
Known	173	63	236 (95.16%)
Unknown	9	3	12 (4.83%)
	182	66	248
Marital status	Male	Female	Total
Married	145	51	196 (79.03%)
Unmarried	29	11	40 (16.12%)
Not known	8	4	12 (4.83%)
	182	66	248

Table 3: Distribution of cases according to place of suicide

Place of Suicide	Male	Female	Total
Home	63	36	99 (39.90%)
Water bodies	31	11	42 (16.93%)
Farm/fields	57	16	73 (29.43%)
Railway tracks	22	3	25 (10.08%)
Forest	9	0	9 (3.62%)
	182	66	248 (100%)

Table 4: Distribution of cases according to cause of death

Cause of Death	Male	Female	Total
Hanging	68	26	94 (37.90%)
Poisoning	44	17	61 (24.59%)
Drowning	31	11	42 (16.93%)
Burns	17	9	26 (10.48%)
Railway accidents	22	3	25 (10.08%)
	182	66	248 (100%)

Table 5: Distribution of cases according to occupation and probable reason for suicide

Occupation	Male	Female	Total
Farmer	26	9	35 (14.11%)
Labourer/ daily wage worker	57	22	79 (31.58%)
Service men/ Government employee	23	6	29 (11.69%)
Self employed	39	11	50 (20.16%)
Students	9	3	12 (4.83%)
Housewife	--	7	7 (2.82%)
Unemployed	17	2	19 (7.66%)
Domestic help	3	2	5 (2.01%)
Unknown	8	4	12 (4.83%)
	182	66	248
Probable reason	Male	Female	Total
Financial / Job loss	73	8	81 (32.66%)
Domestic conflict/Violence	47	38	85 (34.27%)
Poverty and Hunger	13	3	16 (6.45%)
Anxiety and Depression	40	14	54 (21.77%)
Not Known	9	3	12 (4.83%)
	182	66	248 (100%)

Discussion

Suicide is a preventable loss that affects families, communities, and the entire country. Mostly suicides worldwide are related to depression and psychiatric diseases.

WHO did predict the rise in the number of mental health problems due to the global pandemic and has addressed it through various modes like messages and publications related to mental health awareness and prevention⁴.

In the present study out of 897 postmortem examinations 248 cases were suicides. In this 73.38%

were males and 26.61% were females. Similar proportion of sex wise distribution was seen in the studies of Panigrahi et. al⁵ and Pathare et. al⁶.

Most of the subjects committing suicides were in the middle age group(21 to 40 years) with 76.20%. The underlying reason may be that productive adults/working adults and people on whom family burden is the most, bore the maximum grunt and stress related to the pandemic. The stress of supporting the family, family issues, job and financial stresses compounded the already existing pandemic stress. This is in concurrence with the study of Shrivastava et. al⁷.

Hanging is the preferred method of suicide in 94 (37.90%) cases followed by poisoning in 61 (24.59%) cases, drowning in 42 (16.93%) cases, burns in 26 (10.48%) cases and railway accidents in 25 (10.08%) cases. The findings are similar to the studies by Mamun et. al.⁸ and Goyal et. al.⁹. This preponderance of hanging can be due to repeated lockdowns and loss of work/jobs making the victims stay indoors/at home for longer duration. Moreover, materials and space required for hanging is easily accessible to most people.

Majority of deaths were at home (99, 39.90%), followed by farms/fields (73, 29.43%), water bodies (42, 16.93%), railway track (25, 10.08%) and forest (9, 3.62%). Similar findings were noted in the study by Ashok S J¹⁰. Social and emotional isolation contributes to increase in psychological disorders and suicidal behaviour.

Daily wage workers/labourers and self-employed were badly affected by the pandemic (129, 51.74%). Repeated lockdowns, restrictions over activities, lack of opportunities of livelihood lead to migration. The uncertainty, unemployment, closure of small stall on the roadside etc. lead to severe impact on daily wage workers and self-employed people. Study by Richa et. al.¹¹ revealed similar results.

Domestic violence /conflicts (85, 34.27%) were the predominant factor for suicides, followed by financial/ job loss (81, 32.66%), anxiety and depression (54, 21.77%) and poverty/hunger (16, 6.45%). Cause for suicide was not known in few cases (12, 4.83%). Frequent lockdowns have led to increased domestic abuse/conflicts as a greater number of women and children are trapped in their homes with the abusers. Lack of employment and closure of self-employment avenues also led to men being at homes for longer durations and venting their anger and frustration over family members. Similar results were seen in study by Shrestha R et. al.¹².

Conclusion

Preventing suicides during COVID-19 era is a challenging and unavoidable task. There should be continuous traditional and social media campaigns, awareness programs to promote mental health and reduce distress. Our study findings reemphasize the

need of proactive responses to address the mental health issues and economic issues of the pandemic.

Risk of suicide often increases with rising unemployment and related strains, interpersonal violence, substance abuse, financial losses. Effective prevention efforts will be required to comprehensively deal with the full spectrum of mental health disorders and issues. Active outreach is necessary, especially for people with history of psychiatric disorders, COVID-19 survivors, and older adults.

The efforts should be concentrated and of both short and long-term in nature to prevent these deaths. Government should consider providing financial grants for food and unemployment support. The print, television and social media has an immensely vital role to play. Let's hope that the efforts of clinicians, researchers, policy makers, media and public in general will reduce COVID-19 related suicides.

Conflict of Interest: Nil

Source of Funding: Self

Ethical Clearance: It is a retrospective study and identity of the deceased is nowhere disclosed. Therefore, the approval of Institutional Ethics Committee is not required.

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