

Pattern of Suicidal Deaths in the First Month of Lockdown at A Tertiary Care Hospital: a Time Trend Analysis

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Abstract

Lockdowns and quarantines were set up in various countries around the world to combat the Corona virus pandemic. The pandemic has its mental health consequences which have been aggravated by the lockdown measures. The resulting psychological distress and depression has ultimately led to suicides. This study explores the trends of suicide in the month of the lockdown and compared it with those to the prior months. The study was conducted between 25th January 2020 to 24th April 2020 and March 25th 2019 to April 24th 2019 at Cooch Behar Government Medical College and Hospital, Cooch Behar. 52.1% cases of suicide were recorded in the month of lockdown which increased from 34.1% in February 2020 and 43.1% in March 2020. Most cases of suicide in the period of lockdown were in the second and third decade of life with a male predominance. For the period of lockdown, housewives, businessmen and labourers were found out to be the vulnerable population. A social and public health response in addition to a mental health response is crucial to prevent suicidal behaviour in lockdown period.

Keywords: COVID-19 suicide, Lockdown, COVID-19 mental health, Economic recession.

Introduction

With the turn of the New Year, the entire world was slowly engulfed by the pandemic of the novel corona virus. To combat this highly contagious virus, different countries came up with lockdowns and quarantines for various spans of time, India not being an exception. Lockdown is a situation in which people are not allowed to enter or leave an area freely because of an emergency, in this case the corona virus pandemic. The first case of COVID 19 in India was reported in the state of Kerala on 30th January 2020 and in West Bengal on 17th March 2020.^{1,2} A nationwide lockdown was imposed in India on the 25th March 2020.

As evident in some of the previous pandemics, COVID 19 is also having some grave psychological consequences. People are being riddled with fear, anxiety

and chaos. The impending isolation from near and dear ones petrify people. They become panic stricken. And this panic contagion demoralizes people who are overwhelmed by emotions leading to hopelessness and desperation. Incidentally, these psychological changes often spread its ugly wings with suicides being the fatal outcome.

Every year, almost one million people die from suicide.³ According to WHO, every 40 seconds a person dies by committing suicide somewhere in the world.⁴ And there have been evidences that suggest deaths by suicide had increased during pandemics.

In the Indian context, the NCRB data suggests that overall a total of 1,34,516 suicides were reported in 2018, which showed an increase of 3.6% in comparison to 2017.⁵ Our state of West Bengal accounted for 13,255 of these suicides in 2018.⁵ No specific data were obtained from our place of study i.e. Cooch Behar. In our present study we have tried to find out the number of suicides in the month of the lockdown and its prevalence as compared to the previous two months and the same

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time frame from the previous year.

Methodology

This observational, descriptive, comparative and analytical study was conducted in the department of Forensic Medicine and Toxicology, Cooch Behar Government Medical College and Hospital. The period of study was from 25th January 2020 to 24th April 2020 and March 25th 2019 to April 24th 2019. All autopsies conducted during this period of time except the unknown decomposed bodies and the obscure autopsies were considered in this study.

The cases for the year of 2020 were divided into three months viz. March 25th 2020 to April 24th 2020 (the first month of the lockdown – April 2020), February 25th 2020 to March 24th 2020 (the month prior to the lockdown – March 2020) and January 25th 2020 to February 24th 2020 (couple of months prior to the lockdown – February 2019). The cases from the month of lockdown was also compared to the same time period from last year i.e., March 25th 2019 to April 24th 2019 (April 2019), to decipher if there is any variations owing to seasonal changes or climatic changes.

Detailed history of the case was initially noted from the inquest reports, bed head tickets, injury report and other relevant documents provided. Informations were gathered from the deceased's close relatives, friends, police and other available persons who were present at the time of the incidence and those accompanying the victims, with special reference to general information like Name, Age, Sex and Occupation. The suspected causes of death and modes of death were preliminary noted from the investigating report submitted by the police i.e., the inquest paper. These were further corroborated with the autopsy findings, the information shared by the deceased's relatives and other available persons and the place of occurrence visit in some cases.

The data collected during this study was tabulated in a pre determined proforma. It was further analyzed in tabular form along with its representation in form of diagrams and charts.

Results

A total of 335 cases which fulfilled the inclusion and exclusion criteria's were recorded.

There were 85 recorded cases in February 2020 out of which 45 (52.9%) of them had an accidental manner of death while 29 (34.1%) of them were suicidal (Figure 1). During March 2020, most of the cases were suicidal (43.1%) which was followed by accidental deaths (40.3%). During the month of lockdown (April 2020), 96 cases were recorded considering the inclusion and exclusion criteria's. Out of these, there were 50 (52.1%) suicidal cases, 27 (28.1%) accidental cases and 14.6% natural cases. During the same period last year (April 2019), 82 cases were reported, out of which 40.2% was suicidal and accidental each.

Of the number of people committing suicide in the period of February 2020, 33.3% were between the age group of 21-30 years followed by 23.3% in the group 11-20 years (Table 1). But in the next period March 2020, 25.8% of people in the age group of 51-60 years committed suicide while 22.6% of people were in the 11-20 and 21-30 years bracket. In the lockdown period (April 2020), 26% of those committing suicide were between the age group of 21-30 years and 31-40 years each followed by 18% in the age group of 41-50 years. While in April 2019, about one third of those committing suicide were between 21-30 years.

A female predominance among the number of suicides was seen only in year of 2019 where 51.5% females committed suicide (Table 2). An increasing trend of suicide among the males was seen in 2020. In the first period, i.e. February 2020, 51.7% males committed suicide. In the next period 58.1% males committed suicide and 54% males succumbed in April 2020.

In the Table 3, it was observed that, housewives account for most of the persons committing suicide. Number of housewives committing suicide increased from 31% in February 2020 and 25.7% in March 2020 to 17 (34%) in the month of lockdown. 16% of business men and 14% of labourers committed suicide in April 2020.

Hanging was the common method to commit suicide in all the months, 80% during the month of lockdown, 72.7% in April 2019 and 67.7% and 65.5% in the months of March and February of 2020 respectively. The other notable methods in the month of lockdown were self-ingestion of poison 10% cases and self-immolation 4% cases. (Table 4)

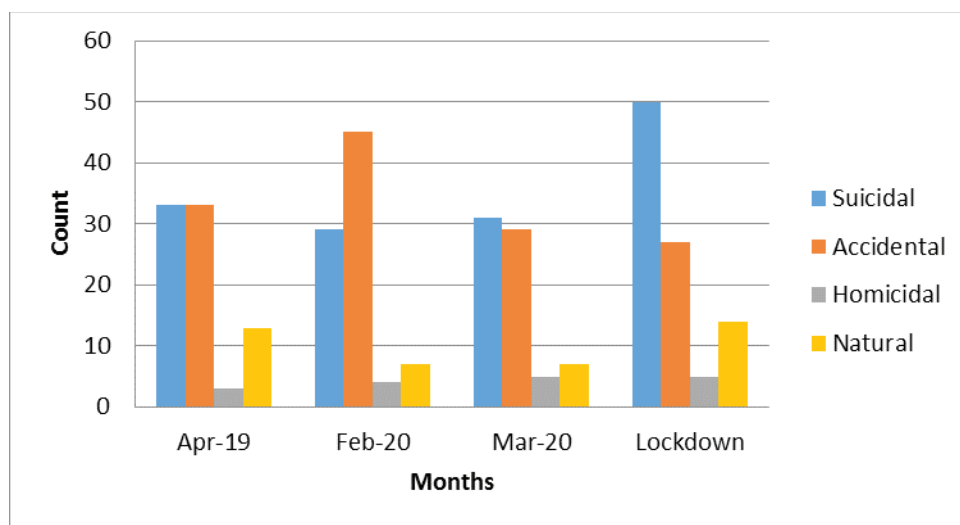


Figure 1: Manner of death in relation to months.

Table 1: Age wise distribution of suicidal cases.

Age group	April 2019	February 2020	March 2020	April 2020
Below 10 years	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
11 to 20 years	7 (21.2%)	7 (24.1%)	7 (22.6%)	6 (12.0%)
21 to 30 years	10 (30.3%)	10 (34.5%)	7 (22.6%)	13 (26.0%)
31 to 40 years	3 (09.1%)	4 (13.8%)	4 (12.9%)	13 (26.0%)
41to 50 years	3 (09.1%)	0 (0.0%)	3 (09.7%)	9 (18.0%)
51 to 60 years	4 (12.1%)	4 (13.8%)	8 (25.8%)	5 (10.0%)
61 to 70 years	4 (12.1%)	3 (10.3%)	1 (03.2%)	3 (06.0%)
Above 70 years	2 (06.1%)	1 (03.4%)	1 (03.2%)	1 (02.0%)

Table 2: Sex wise distribution of suicidal cases.

Sex	April 2019	February 2020	March 2020	April 2020
Female	17 (51.5%)	14 (48.3%)	13 (41.9%)	23 (46.0%)
Male	16 (48.5%)	15 (51.7%)	18 (58.1%)	27 (54.0%)

Table 3: Occupation wise distribution of cases of suicidal cases.

Occupation	April 2019	February 2020	March 2020	April 2020
Farmer	6 (18.2%)	4 (13.8%)	5 (16.1%)	3 (06.0%)
Labourer	3 (09.1%)	4 (13.8%)	5 (16.1%)	7 (14.0%)
Service men	1(03.0%)	2 (06.9%)	2 (06.5%)	1 (02.0%)
Business men	2(06.0%)	2 (06.9%)	2 (06.5%)	8 (16.0%)
Students	4(12.1%)	3 (10.3%)	2 (06.5%)	5 (10.0%)
Housewife	10 (30.3%)	9 (31.0%)	8 (25.7%)	17 (34.0%)
Unemployed	5(15.2%)	4 (03.4%)	5 (16.1%)	7 (14.0%)
Unknown	2(06.0%)	1 (03.4%)	2 (06.5%)	2 (04.0%)

Table 4: Distribution of cases according to methods of suicide.

Cause of death	April 2019	February 2020	March 2020	April 2020
Burn	3 (09.1%)	5 (17.2%)	3 (09.7%)	2 (04.0%)
Hanging	24 (72.7%)	19 (65.5%)	21 (67.7%)	40 (80.0%)
Poisoning	4 (12.1%)	4 (13.8%)	6 (19.4%)	5 (10.0%)
Others	2 (06.0%)	1 (03.4%)	1 (03.2%)	3 (06.0%)

Discussion

The mental health effects of any pandemic is bound to be profound, the corona virus disease COVID 19 not being an exception. The lockdown following this pandemic has even adverse effect on the general population. They feel as if they have been sentenced for an unknown crime to an indeterminate period of punishment. And this feeling of impending doom has led to a surge in the suicide rates.

The number of cases of suicide has drastically increased from 34.1% and 43.1% in the couple of

months prior to suicide to 52.1% during the first one month of the lockdown following the pandemic. This is in concurrence to studies in Hong Kong where cases of suicides did show an alarming rise during the 2003 SARS pandemic and the USA during the 1918-19 influenza pandemic.^{6,7}

Most of the subjects committing suicides were in the middle age group with 52% in the age bracket of 21-40 years (26% in each decade) and another 18% within 41-50 years of age. These age groups denote the working class or those people on whom the family burden in the utmost. The thought of how they are going to support

their families in such a period of crisis has made people anxious. Panic attacks have increased, depression has surged and people in such a stressful situation are opting for suicide as the only way out. This is in concurrence to Srivatsava et al, who identified presence of a stressful life event as definite risk factors for attempting suicide.⁸

The other notable group who have been particularly affected are those who are addicted to consumption of alcohol or other substances. Most of them belong to the age group of 21- 50 years. Due to the closure of most shops, it has been difficult for them to procure these with ease. It inevitably leads to withdrawal symptoms like insomnia, tremors, palpitations, restlessness and suicidal ideation. These symptoms look identical to those in depressive episodes, often presenting with similar levels of hopelessness and ultimately compel people to commit suicide.⁹

Lockdown has also seen a surge in the number of domestic abuse cases, worst affected are the children and women who are now trapped inside their homes with their abusers. Men who are either unemployed or frustrated being home often take to abusing their wife and children. The Women commission of West Bengal have also stated that cases of domestic violence have increased since the imposition of lockdown.¹⁰ And domestic violence is one of the risk factors for suicide. In a study conducted at Bengaluru, it was found that in more than one-third of females, the major risk factor for suicide was domestic abuse.¹¹ Our study shows that about 46% of those who committed suicide during the lockdown period were females. There was also a rise among the housewives committing suicide (34%) during the period of lockdown. A study by Banerjee et al also supported the above findings and stated that the commonest cause of suicide in women was quarrel with husband.¹²

Apart from housewives, those involved in business and the labourers comprise the next major groups in which the suicidal rates have increased. It goes without saying that the lockdown has led to unemployment especially among the labourers and daily wage earners. People have had their business touching a slump. They don't know how they will get back on their feet, even when the isolation measures are lifted. And loss of employment and financial stressors are perceived as

risk factors for suicide.¹³ In the United States, during the period of recession from 2007 -2009, the bleak job market and economic crisis lead to an estimated 4750 excess suicide deaths.¹⁴ Our study is also in trend with those in Europe which indicates a significant rise in suicides from the economic recession, totalling more than 1000 excess deaths in UK alone.^{15,16}

There is no denying the fact that suicide is likely to become a more pressing concern as the pandemic spreads. It is bound to have long term negative effects on the economy, the vulnerable groups and the general population as whole. Preventing suicides therefore needs urgent action and serious consideration. Mental health initiatives focussing on educating the public on how to best deal with immense pressure and anxiety should be established immediately. Targeted mental health surveillance of population at risk, including patients with prior mental health diagnosis and elderly should be implemented and followed by effective interventions to minimize suicidal thoughts. Governments should consider providing financial grants for food and unemployment support. The media has an immensely vital role to play. They should refrain from irresponsible media reporting of suicide and highlight on the precise facts about the causes and circumstances of suicide with due consideration to mental health problems.¹⁷ It is vital that they adhere to the existing and COVID 19 specific guidelines regarding reporting of such suicidal deaths.¹⁸ Further well designed and large scale studies are required to look deeply in to the risk factors for suicide and formulate proper preventive measures.

Conclusion

The COVID 19 pandemic and the nationwide lockdown have no doubt caused distress and have left thousands susceptible to mental health problems and suicidal behaviour. Our study is only a harbinger of what's to come. The suicidal surge may even persist for longer and actually peak later than the actual pandemic. Thus, the need of the hour is a well-coordinated multi departmental and multi phased approach to curb this surge.

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