Original Article

A Comparative Study of Suicide Cases in Pre-COVID and COVID Phases

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Abstract

Background: India's first case of COVID-19 was in January 2020. National lockdown brought along mental ailments like depression, anxiety, stress, phobias, etc. ***Objective:*** To find the number of suicidal deaths during the COVID pandemic and to compare the Pre-COVID phase, and the factors affecting them. ***Methods:*** This was a cross-sectional, retrospective study conducted at a tertiary care medical centre from 2018-2021. Suicide cases coming for autopsy in 2018-2019 and 2020-2021, excluding those where the manner of death was not documented, were analyzed. Age, sex, residence, occupation, and cause of death from Autopsy reports and Inquest papers were noted. ***Results:*** Out of 362 suicide cases, 43.64% were in Pre-COVID and56.35% in the COVID phase with 42.93% males in Pre-COVID and 57.70% in the COVID phase. Females were 52.06% in Pre-COVID and44% in the COVID phase. The majority of cases in the study period were in the 21-30 years and 31-40 years groups. Housewives were the majority in the Pre-COVID phase (32.91%), and daily-wage labourers in the COVID phase (49.26%). The number of hanging and burn cases were similar and the majority during the Pre-COVID phase, while in the COVID phase hanging cases were a majority. ***Conclusion:*** COVID-19 pandemic showed a rise in suicide cases and a shift towards male preponderance that was daily-wage labourers and hanging cases, which might be due to loss of pay during the phase.

Keywords: COVID-19, suicide, daily-wage labourers, hanging

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Introduction

Death due to suicide is a entirely preventable occurence. It affects families, communities, and nations. Over 700,000 individuals worldwide die from suicide each year, making it a serious public health issue. Among people aged 15 to 29, suicide ranks as the fourth most common cause of death. Low- and middle-income nations account for 77% of all suicides worldwide. Among the most popular suicide techniques used worldwide is pesticide ingestion, hanging, and using a gun.[1] The Corona Virus Disease 2019 (COVID-19), also known as the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), initially surfaced in Wuhan, China, in November 2019.[2] Since then, COVID-19 has expanded to every continent in the world, prompting the World Health Organization to formally classify the epidemic as a pandemic.[3] As a result, the COVID-19 pandemic is thought to be the worst of the century and is expected to result in an increasing number of

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fatalities. COVID-19 may also result in direct and indirect mortality through suicide in addition to respiratory discomfort and distress that ultimately result in death.[4] India's first case of COVID-19 was reported on 30th January 2020 from Kerala.[5] The national lockdown was implemented in four different phases.[6] The pandemic profoundly impacted mental health. 1,53,052 suicides were reported in 2020, an 8.7% increase during 2020 over 2019.[7] Hence this research was taken up to find the number of suicidal deaths during the COVID pandemic and to compare between Pre-COVID phase, and factors affecting them.

Methods

This cross-sectional retrospective study was taken up in a tertiary care medical centre among the suicide cases brought for medicolegal autopsy. The study period was from the year 2018 to 2021. The cases from 2018 and 2019 have been marked as the Pre-COVID phase and from 2020 and 2021 as COVIDphase for the study.

Inclusion criteria: All suicide cases during the study period have been included in the study except those where the manner of death was not documented or was doubtful and in severely decomposed bodies.

Data has been collected from the accessible records of police inquest and autopsy reports using a Data collection proforma, which was pretested and validated through a pilot study. Data has been collected in the variables of Age, Sex, Residence, Occupation, and Cause of death. All the data has been encoded in non-identifiable serial numbers and tabulated in an Excel sheet.Statistical Analysis ofdata was done and expressed in numbers and percentages using Microsoft Excel.

Results

During the study period of 4 years, a total of 1155 numbers of autopsies were performed out of which 362 cases were opined to be of suicide. In the pre-COVID phase, 158 cases (43.64%) of suicide were noted which is significantly lower than that in the post covid phase with 204 cases. The highest number of suicide cases was recorded in 2020 with 117 cases of suicide. In the Pre COVID phase, a higher number of females were involved which reversed in the COVID phase with a higher number of male cases recorded as shown in Figure 1.Age distribution of cases did not show any major difference in both the phase. 21-30 years followed by 31-40 years were the most commonly affected group as shown in Figure 2.Housewives were most commonly involved in the Pre COVID phase while Daily wage labourers were the most involved occupational group as shown in Figure 3. While self-inflicted burn deaths were high in Pre Covid phase hanging deaths were much more common in the COVID period as shown in Figure 4. The residents of all the cases were of rural background.

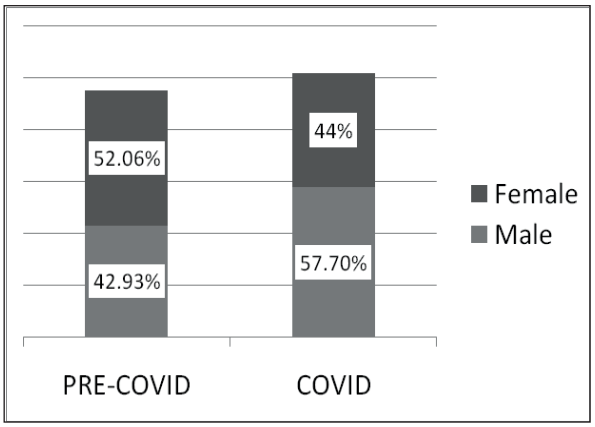

Figure 1: Distribution of cases based on the sex of the individual

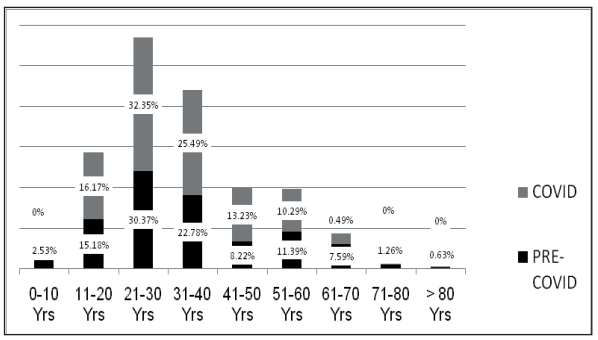

Figure 2: Distribution of cases based on the age of the individual

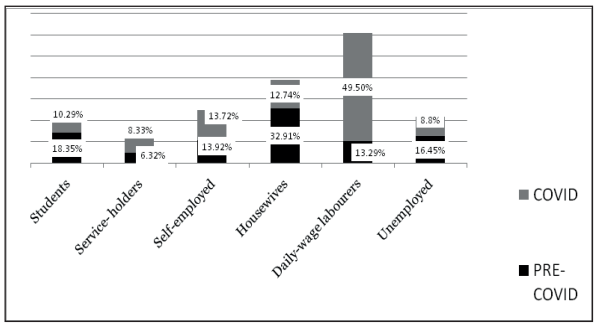

Figure 3: Distribution of cases based on the occupation of the individual

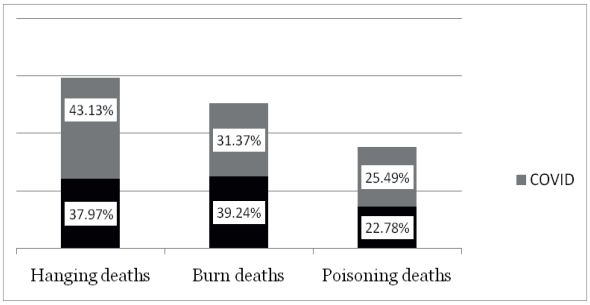

Figure 4: Distribution of cases based on the cause of death of the individual

Discussion

In contrast to other pandemics, COVID-19 has complicated processes that have aided in its swift and disastrous global spread.[8] The pandemic is regarded as the worst of the twenty-first century. The unexpected rise and spread of the COVID-19 virus have caused a rise in community unrest, which has resulted in a pandemic status and may have ultimately contributed to the rising trend of suicidal attempts reported during the COVID-19 pandemic compared to other pandemics the world has previously experienced.[9] Anxiety and depression, financial loss/job loss, domestic abuse, and pre-existing mental health condition(s) were among the characteristics that one systematic review identified as risk factors for suicidal attempts and deaths during the COVID-19 pandemic.[10] In our study we found 56.36% of suicide deaths during the COVID phase as compared to 43.64% during the Pre-COVID phase. This clearly shows an increase in suicidal trends during the COVID phase which is similar to the findings of Calati et al.[7] A similar pattern in suicide rates among those afflicted by war and natural calamities, is a common occurrence. In vulnerable populations, such as those with pre-existing psychiatric disorders and people who live in areas with a high COVID-19 prevalence, social isolation, anxiety, fear of contracting an infection, uncertainty, chronic stress, and financial difficulties, these factors may contribute to the development or exacerbation of depressive, anxiety, substance use, and other psychiatric disorders, ultimately leading to suicidal ideation.[11] During the Pre-COVID phase, there was female preponderance. According to a study that compared different risk factors for suicide attempts by sex, familial support had the biggest sex difference. Young women were much more likely to attempt suicide when their family's support was inadequate; young men were not affected by this relationship.[12] There is male preponderance in our study during the COVID phase. This is in accordance with Pathare et al.[13] and Acharya et al.[14]. There is no difference in affected age groups in Pre-COVID and COVID phases. In both phases, ages between 21-40 years are majorly affected. This is similar to Pathare et al who found 30-50 years as a majorly affected age group.[13] During the Pre-COVID phase, housewives were majorly affected while in the COVID phase, daily wage labourers were the majority. Pathere et al in their study did not find any difference in occupation affecting suicide deaths. However, Rajkumar et al found migrant workers to be the majority.[15]Another researcher pointed out the helplessness of migrant workers and their joblessness leading to suicidal ideation.16 Burn Injuries were the major cause of death in Pre-COVID, while Hanging was the major cause of death during the COVID phase. This is similar to the findings of previous researchers who found hanging as the cause of death in the majority of suicides during the COVID phase.[13,15] Sher et al.[17] found that those who had previous psychiatric disorders tended to commit suicide during the COVID pandemic. Goto et al.[18] found family disputes to be a major predisposing factor to suicidal ideation during the COVID phase. The lockdown may have increased young people's exposure to trauma from family members, raising their likelihood of developing a variety of psychopathologies, including anxiety, sadness, and disruptive conduct.

The importance of social connections during pandemics to prevent suicides can be a public health strategy to minimize loneliness brought on by quarantine. Notably, brief contact interventions—through phone calls or social media seem to be a promising method for lowering the risk of suicide by fostering social support and encouraging access to mental health care from a distance as suggested by some researchers.[19] Early detection and prompt care for people exhibiting suicidal behaviours are essential, especially in light of the significance of reducing suicide attempts and fatalities brought on by the COVID-19 pandemic.[20] The increased suicide rates we discovered during the pandemic may have several political repercussions.

Governments and policymakers need to be aware of potential ways that the pandemic and the ensuing public health responses to it could increase the psychological and socioeconomic factors that contribute to suicide. Economic safety nets and methods for delivering mental health services tailored to local socioeconomic disparities and needs should be included in public health interventions against the pandemic, especially the more drastic ones like lockdowns and business shutdowns. To comprehend the causes of suicide and how COVID-19 affects suicide in various subpopulations, more epidemiological studies are required.

Conclusion

The COVID-19 pandemic showed a rise in suicide cases. There has been an appreciable shift towards male preponderance. Daily-wage labourers were the majority of victims. There has been a rise in the number of hanging victims. Any further COVID pandemic spread must keep the economic aspect of the affected population in mind and the society as a whole has to come up with a better and executable plan of action to prevent such deaths. Also, the mental aspect of losing one's income source is a major contributory factor to the rise of suicide cases in the COVID phase.

Conflict of interest: None declared.

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Authors' contribution: All authors were equally involved in data collection, analysis, manuscript preparation, revision and finalization.

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