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Original Research

Reasons to Claim One's Own Life during the COVID-19 Pandemic in South India: A Cross-Sectional Study

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Abstract

Objective: By increasing the risk of isolation, fear, stigma, abuse, and economic fallout, COVID-19 has led to an increase in the risk of psychiatric disorders, chronic trauma, and stress, which eventually increase suicidality and suicidal behavior.Thus, the present study intends to evaluate the reason for the attempt to suicide due to the COVID-19 pandemic in the south Indian population.

Design: Cross-sectional study

Setting: The study was conducted in R L Jalappa Hospital and Research Centre, Kolar.

Participants: This study was conducted on 91 patients admitted to the general medicine department due to suicide attempt because of the COVID 19 pandemic.

Methods: A single examiner conducted a structured interview with a pretested questionnaire to all the participants. Participants were asked to indicate the primary reason or motivation for the suicide attempt, consisting of a set of questions on personal and family reasons and work-related reasons. The questionnaire included personal and family concerns (marginalization, fear and uncertainty, domestic abuse, loneliness, grief over loss of loved one) and work-related reasons (economic fallout, high-risk environment, shortage of personnel and PPE). Descriptive analysis for quantitative variable was done by mean and standard deviation and for categorical variable was expressed in frequency, and proportion. For non-normally-distributed quantitative parameters, medians and interquartile range (IQR) were compared across study groups using the Kruskal-Wallis test (> 2 groups). Data was analyzed using coGuide software, V.1.03.

Results: The mean age was 29.47±11.06 years. The majority (43.63%) were aged between 21 to 40 years age group. The majority (72.53%) reported personal and family concerns as reasons/motivation for suicide, whereas only 17.58%reported work-related concerns. There was a statistically significant difference across reason ormotivation for suicide with age (in years) and gender (p value <0.001).

Conclusion: The study concluded that more than half of the patients pointed the personal and family concern as the major reason for suicide attempts in the pandemic. It is vital to emphasize the mental health well-being of the population and take proactive steps to minimize its detrimental effects during the COVID-19 pandemic.

Keywords: COVID-19, Depression, Mental Health, Social Distancing, Suicide.

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Introduction

The coronavirus disease 2019 (COVID-19) started in China at the end of 2019 and has quickly spread globally. In March 2020, The World Health Organization declared the virus outbreak a pandemic. Although the medical professionals and public health specialists are focused on treating sick individuals and containing the spread of the virus in the general population, less attention is given to the psychiatric consequences of the COVID-19 disease.[1]

The issues like social distancing, isolation, and quarantine, as well as the social and economic crises, may trigger psychological mediators like worry, fear, sadness, anger, annoyance, frustration, guilt, helplessness, loneliness, and nervousness, which are the common features of mental health suffering.[2,3] Such mental health issues may lead to various suicidal behaviors like suicidal ideation, suicide attempts, and actual suicide. Studies have reported that around 90% of global suicides are due to mental health conditions in individuals, like depression.[4] Similar situations were reported during the previous pandemic crisis. In Hong Kong, an increase in the suicide rate among the geriatric population was observed both during and after the SARS (Severe Acute Respiratory Syndrome) pandemic in 2003.[3]

Suicide is the ultimate form of human sacrifice for individuals who cannot bear mental suffering. WHO has estimated that there is approximately 800,000 suicidal death each year, with a rate of 10.5 per 100,000 people (males: 13.7 per 100,000; females 7.5 per 100,000). The second leading cause of death among people aged 15-24 across the whole world is suicide, and for each suicidal death, around 10 to 20suicide attempts are estimated.[5,6]Suiciderates in India are among the highest in the world.[7]A prevalence rate of 6.4% of suicide risk in the population sample was reported by

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the National Mental Health Survey in India.[8]The fear of getting the disease, the fear of passing the disease onto others, mental instability (e.g., depression, anxiety and/or stress) due to quarantine, isolation, economic hardship, death of close family member due to COVID-19, and the shortage of food and alcohol were the reasons for suicide during this pandemic, based on published reports.[9,10]There have been reports of suicide in India as early as February 12, 2020, due to excessive fear of contracting COVID-19, eventhough the infection was not spread across the country at that time. A retrospective study from national newspaper reports from India showed 69 cases of suicide due to various reasons aboutCOVID-19 from March 2020 to May 2020.[9] Further, newspapers/bulletins reported isolated suicide cases from different parts of India due to the alcohol ban during the lockdown period.[11,12]

The pandemic may cause a significant degree of mental health crisis across the globe. Therefore, brief messages related to mental health and psychological considerations during the COVID-19 outbreak had been published by the World Health Organization (WHO). The importance of psychological first aid had been highlighted.[13]Even though there are many theories associated with suicidal tendencies, there is limited data on the exact reason for suicide attempts in the literature in the COVID-19 pandemic period. Thus, the present study intends to explorethe reasons for attempting suicide due to the COVID-19 pandemic in the south Indian population. The study hypothesis was, whether any association exists between the demographic variable and reasons for attempting suicide.

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Objective

To describe the reason for the attempt to suicide due to COVID-19 pandemic.

To estimate the outcome of suicide attempts due to the COVID-19 pandemic.

Methods

Study Population and Study Site: The patients admitted to the department of general medicine of R L Jalappa Hospital and Research Centre, Kolar,due to suicide attempts because of the COVID-19 pandemic.

Inclusion Criteria:Patients aged above 18 years.

Exclusion criteria: Patients who are not willing to participate in the study, individuals with prior history of mental illness.

Study design: Cross-sectional study.

Sample size and sampling method: All the 91 patients who were admitted due to attempt suicide because of the COVID-19 pandemic during the study period were selected by universal sampling.

Study duration: Four months from April 2020 to August 2020.

Ethical considerations: The study was approved by the institutional review board and the ethics committee of the hospital and informed consent was obtained from each participant.

Data collection tools and clinical examination: "An attempted suicide" was defined as an act with the non-fatal outcomein which an individual deliberately initiates a non-habitual behavior that

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without intervention from others will cause self-harm or deliberately ingests a substance in excess of the prescribed or generally recognized therapeutic dosage and which is aimed at realizing changes, which the subject desired via the actual or expected physical consequences.[14]

The main instrument for data collection was pretested questionnaire containing the reason for suicide. After the emergency medical care, the interview was planned during the standard psychiatric care given to every attempt to suicide patients. Only the relatives of two patients who died were self-reported as covid pandemic was the reason for the suicide, for those two patients questionnaire was applied on their close relative and included in the analysis. The first question asked was the "uncertainty due to COVID-19 was the primary reason for your suicide"? The respondents who replied yes were included in the further study. A structured interview was used and preferred here to assume the respondents' lack of compliance to the self-administered questionnaire.

The assessment questionnaire was designed to tap the particular reason for suicide attempts, and it included personal and family concerns(marginalization, fear and uncertainty, domestic abuse, loneliness, grief over loss of loved one) and work-related reasons (economic fallout, high-risk environment, shortage of personnel and PPE). Participants were asked to indicate which reason was the primary motivation for their suicide attempt. A total of 10 questions were made from the reasons presented by Banerjee D et al,[15]and were pretested and applied in the structured interview. A panel of experts involving clinical psychologists, physicians, and epidemiologists made face validation (content).Expert opinion on whether to include a question/statement in the survey tool was placed on four-point Likert scale ranges strongly agree 4, agree 3, disagree 2, and strongly

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disagree 1. Finally, the scale level content validity index (S-CVI)average was calculated for a reason for a suicide attempt.(0.9)A value of 0.8 or more for S-CVI was considered the threshold point for acceptance of the content in the questionnaire of the survey.[16]

Statistical analysis

Reason or motivation for suicide was considered as the primary outcome variable. The mode of infliction and outcome of suicide was considered as the secondary outcome variable. Age and gender were considered as explanatory variables. Descriptive analysis was carried out by mean and standard deviation for quantitative variables, frequency, and proportion for categorical variables. All quantitative variables were checked for normal distribution. For non-normally-distributed quantitative parameters, medians and interquartile range (IQR) were compared across study groups using the Kruskal-Wallis test (> 2 groups). Categorical outcomes were compared across study groups using the chi-square test. P value < 0.05 was considered statistically significant. Data was analyzed using coGuide software, V.1.03.[17]

Results

A total of 91 subjects were included in the final analysis.

The mean age was 29.47±11.06 years. The majority (43.63%) were aged between 21 to 40 years, and females were more than males (64.8%).Single and married were more as 47.3% and 44% respectively.The majority (72.53%) were reported personal and family concerns as reasons/motivation for suicide, whereas only 17.58% reported work-related concerns. True and hidden types had been more as type of suicidal attempts as 45.1 and 38.5% whereas manipulative

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type was vary less as 16.5%.The mode of infliction of the majority of participants was (93.41%) poisoning. Death was reported for only 2 (2.20%) participants, and 89 (97.80%) were discharged. (Table 1)

There was a statistically significant difference across reason or motivation for suicide with age (in years) (p value <0.001). The difference in gender across the reason or motivation for suicide was found to be significant with a p-value of <0.001 with personal and family concerns was the major reason for suicide in females.Personal and family concerns were more in all single, married and widowers as 65.1%, 77.5% and 87.5% respectively.(Table 2)

Discussion

A total of 91 subjects were included in the study. The mean age of the participants was 29.47 ± 11.06 years, and the majority of them were females, 64.8%.Personal and family concerns (72.53%) were the most common reason for suicide, followed by work-related concerns (17.58%). Poisoning (93.41%) was the major mode of suicide infliction, followed by hanging (4.4%). The majority survived, while twoindividuals succumbed to death.

Personal and family concerns (72.53%) were the most common reason for suicide, of which marginalization (33.33%) was the main reason, followed by fear and uncertainty, domestic abuse, loneliness, and grief over the loss of a loved one. A study done by Dsouza, D. D et al [9,] from the data published in the national newspaper showed that fear or anticipation of COVID-19 infection was the most prominent suicide causality, although most of the victims were later diagnosed with COVID-19 negative in the autopsy.Family and interpersonal relationships might affect health in ways that might result in suicide.[18] The interpersonal theory has two components, thwarted belongingness and perceived

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burdensomeness,considered the main reasons for suicide.[19] Prejudice, social stigma, blame and xenophobia, and communal sentiments were considered as the contributing factors for marginalization.[15] Hopelessness and emotional pain may lead to loneliness and ultimately suicidal behavior.[20] Social isolation and lack of social support may cause loneliness. Thus, the need for belongingness is unfulfilled. Loneliness has been considered a risk factor for suicide attempts and suicidal ideation.[21]Apart from these vulnerabilities, trauma from interpersonal violence especially intimate partner violence,hasrisen during the COVID-19 pandemic time.[22] Women are the ones at the receiving end of such violence, which challenges their belongingness needs and is associated with arousal of dysphoria and suicide risk.[23] It was presumed that economic fallout and substance use might have perpetuated aggressive reactions in men against their partners.[24]

The second major reason for suicide was work-related concerns in the present study. The restrictions being implemented due to COVID-19 had a significant impact on the global economy. In the US, around 2.5 million people lost their job, and unemployment has increased.[25] Many industries like entertainment, tourism, and travel, etc., have been affected in the lockdown period, with uncertainty shadowing their futures. The International Labor Organization (ILO) has predicted unemployment for about 25 million people during the COVID-19 pandemic period alone, which may have prolonged challenges.[26]

The age range was 18 to 76 years in the present study, with the mean age of the attempt survivors being 29.47 ± 11.06 years. The mean age was closer to the age group, i.e., 15–29 years, reported by WHO as the highest risk group for suicidal behavior and death. Suicide attempt was observed more in females than males in the present study. A nationwide study conducted in Japan reported

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a higher prevalence of suicide due to COVID 19 in females. [27]Suicide results in death in 8.5% of cases within such group and is the second major cause of death worldwide.[28,29]Consistent with previous studies, there were significant gender differences in the precipitating stressors among the suicide attempters.[30,31]

Poisoning was the main mode of suicide infliction in the present study, which is consistent with the report of WHO, in which the use of poisonous substances like pesticides isincluded under conventional methods for suicide. Similar results were observed in other studies. [28,32,20]

The WHO has reported that individuals with prior history of suicide attempt are at higher risk for suicide, with about 40 to 100 times elevated risk compared to the general population. Thus, the attempt survivors must be considered as high-risk individuals and need support from those around them, including their families.[28,33] The fear of being discriminated against, stigma, legal hassles, and avoidance of the healthcare system due to pandemic fear can be potent barriers to health care access. Thus, early identification of the at-risk population, especially those suffering from mental disorders, who are quarantined, frontline workers, affected with COVID-19 or relatives of the affected, might be helpful. Traditional and social media campaigns can be conducted to promote mental health and reduce distress. The public must be encouraged to stay connected and maintain relationships via telephone or video and promote healthy habits like eating healthy food, exercise, and adequate sleep. Screenings for anxiety, depression, and suicidal feelings ought to be employed. Suicide prevention in the COVID-19 era is an important and difficult issue. It is to be hoped that the efforts of clinicians, researchers, and policymakers will reduce COVID-19 related suicides.[28,33,34]

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Limitations

Oursample included only the suicide attempters admitted to the emergency department of the hospital. Many of the suicide attempts will not be fatal and may not have contact with professional health services leaving a significant number of suicide attempts unnoticed. Also the study did not collect the data on psychiatric diagnosis, severity of depressive and anxiety symptoms, whether the patients were provided with psychiatric treatment prior to and after suicidal attempts

Conclusion

Globally,the psychologicalimpact of the COVID-19 pandemic is of concern. While existing health facilities prioritize the medical treatment of individuals with COVID-19, the resources to treat the subsequent and related psychological effects are arguably insufficient. Our study concluded that personal and family concerns werethe major reason for the suicide attempt. Relevant public mental health strategies are therefore needed and should be adopted as soon as possible to minimize further suicides as the pandemic is making its strongest impact in this part of the world.

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Abbreviations

COVID-19-Coronavirus Disease, ILO-International Labor Organization, IQR-Interquartile Range, SARS-Severe Acute Respiratory Syndrome, S-CVI-Scale Level Content Validity Index.

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Tables:

Table 1: Summary of baseline parameters (N=91)	
Parameters	**Summary**
Mean age (in years)	29.47 ± 11.06 (ranged 18 to 76)
Gender	
Male	32 (35.2%)
Female	59 (64.8%)
Marital status	
Single	43 (47.3%)
Married	40 (44%)
Widower	8 98.8%)
Reasonormotivationforsuicide	
(1) **Personal and family concerns**	**66 (72.53%)**
• Marginalization	22 (33.33%)
• Fear and uncertainty	14 (21.21%)
• Domestic abuse	13 (19.70%)
• Loneliness	10 (15.15%)
• Grief over loss of loved one	7 (10.61%)
(2) **Work related concerns**	**16 (17.58%)**
• Economic fallout	11 (68.75%)
• High risk environment	4 (25.00%)
• shortage of personnel and PPE	1 (6.25%)
(3) **Others**	**9 (9.89%)**
Mode Of Infliction	
Hanging	4 (4.40%)
Poisoning	85 (93.41%)
Self-inflicted injury	2 (2.20%)
Type Of Suicidal Attempts	
Hidden	35 (38.46%)
Manipulative	15 (16.48%)
True	41 (45.05%)
Outcome	
Death	2 (2.20%)
Discharged	89 (97.80%)

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Table 2: Association of reason or motivation for suicide with demographic parameters (N=91)

Parameter	Reason or motivation for suicide			P value
	Personal and family concerns	Work-related concerns	Others	
Age (N=91)	25 IQR (22 to 32.25)	30 IQR (26 to 32.50)	20 IQR (19.50 to 23.50)	<0.001*
	Personal and family concerns Vs Work-related concerns			0.046
	Personal and family concerns Vs Others			0.007
	Work-related concerns Vs Others			<0.001
Age groups (in years)				
Up to 20 years (N=14)	8 (57.14%)	0 (0%)	6 (42.86%)	‡
21 to 40 years (N=67)	50 (74.63%)	14 (20.9%)	3 (4.48%)	
41 to 60 years (N=8)	6 (75%)	2 (25%)	0 (0%)	
61 years and above (N=2)	2 (100%)	0 (0%)	0 (0%)	
Gender				
Male(N=32)	16 (50%)	12 (37.5%)	4 (12.5%)	<0.001†
Female(N=59)	50 (84.75%)	4 (6.78%)	5 (8.47%)	
Marital status				
Single (N=43)	28 (65.12%)	8 (18.6%)	7 (16.28%)	‡
Married (N=40)	31 (77.5%)	7 (17.5%)	2 (5%)	
Widower (N=8)	7 (87.5%)	1 (12.5%)	0 (0%)	

*Kruskal Wallis test †-Chi square test ‡- No statistical test was applied- due to 0 subjects in the cells

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