



PSYCHOSOCIAL DETERMINANTS OF SUICIDE ATTEMPTS AMID THE COVID-19 PANDEMIC

Psychiatry

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ABSTRACT

Background: The COVID-19 pandemic has led to significant lifestyle changes and pressures, increasing the risk of both suicide attempts and fatal suicides. Public health measures such as social isolation, lockdowns, and travel restrictions implemented during the pandemic have negatively impacted mental health and heightened suicide risk factors. This study aims to identify the socio-demographic and psychosocial risk factors for suicide and assess their influence on the frequency of suicide attempts during the COVID-19 pandemic. **Methodology:** This cross-sectional analytical study was conducted over a period of 18 months among individuals who survived suicide attempts. Socio-demographic and psychosocial factors were analyzed to assess suicide risk. The level of intent was evaluated using Beck's Suicide Intent Scale. **Result:** Among the 90 patients analyzed, the majority (60, 67%) exhibited medium suicide intent, while 18 (20%) showed high intent. Suicide intent was equally distributed across genders, highlighting its prevalence irrespective of gender differences. Notably, 37% of the 27 participants who reported loneliness demonstrated high suicide intent, indicating a significant association between loneliness and suicide intent. However, no significant link was identified between suicide intent and feelings of panic or fear related to the COVID-19 pandemic, emphasizing the need to address loneliness as a critical factor in suicide prevention strategies. **Conclusion:** In our study, unemployed participants facing financial difficulties due to loss of wages during the lockdown showed a significant association with severe suicide intent. Similarly, loneliness during the COVID-19 pandemic was strongly linked to higher suicide intent on the intent scale. Furthermore, participants with a history of past psychiatric illness during the pandemic exhibited significantly higher suicide intent. Notably, the cumulative effect of financial stress, social isolation, and pre-existing mental health conditions appeared to amplify suicide risk, highlighting the urgent need for targeted mental health interventions during such crises.

KEYWORDS

BACKGROUND:

A suicide attempt is an act of self-harm with the intent to end one's life [1]. Such attempts are a critical predictor of mortality risk, occurring 30 times more frequently than completed suicides [2]. Survivors of suicide attempts are at greater risk of post-traumatic disorders, repeated suicidal behavior, and feelings of guilt, shame, and social stigma [3,4]. Suicide is a complex phenomenon influenced by multiple factors, including biological, psychological, and social variables [5]. Emotional and physical breakdowns triggered by adverse life experiences can lead vulnerable individuals to attempt suicide [6,7]. Common stressors for both attempted and completed suicides include relationship conflicts, chronic illnesses, and financial difficulties [8-10]. Understanding these factors is essential to assess suicide risk and identify potential suicidal behavior in individuals [11].

The COVID-19 pandemic has significantly increased the likelihood of suicide attempts and fatalities due to drastic lifestyle changes and added pressures [12-15]. Public health measures such as social isolation, lockdowns, and travel restrictions have negatively impacted mental health, exacerbating suicide risk factors. Research by Deena Dsouza et al. analyzed 69 suicide cases and found that financial hardships, job-related stress, and loneliness were major contributors, followed by fear of COVID-19 infection.

With these insights, it is evident that further research is required to explore the psychological and contextual factors influencing suicides during the COVID-19 pandemic. The current study aims to identify socio-demographic and psychosocial risk factors for suicide while examining the extent to which these factors contributed to suicide attempts during the pandemic. Additionally, it seeks to provide insights into preventive strategies that could mitigate such risks in future crises.

Methodology:

This cross-sectional analytical study was conducted at SMIMER, Surat, a tertiary care center, over a period of 18 months, starting after the first wave of the COVID-19 pandemic. The study received approval from the institutional review board and the ethics committee of the hospital. Informed consent was obtained from all participants prior to their inclusion in the study.

The study included both male and female participants aged 18 years and older who survived suicide attempts during the specified period. A conventional sampling method was employed to select participants, with exclusion criteria set for children and individuals who had completed suicide. In total, 90 participants were assessed for suicide attempts through in-person interviews, which were conducted only after the participants' medical conditions were stabilized. Additional data was obtained from relatives, companions, and admission records

to provide a comprehensive understanding of the cases.

To achieve the research objectives, various risk factors were discussed, including gender, age, marital status, occupation, family structure, and socio-economic status. A semi-structured, self-made questionnaire was designed to assess several psychological factors, including the easy availability of toxic substances, history of domestic violence, feelings of panic or anxiety related to COVID-19, social stigma, loneliness, relapse of past psychiatric illnesses, financial crises, and other mental health conditions exacerbated by the pandemic. These factors were used to evaluate suicide risk.

The Beck's Suicide Intent Scale was employed to measure the level of suicide intent [17]. This scale consists of 20 items, each scored from 1 to 3 points. A total score of 15–19 indicated low intent, a score of 20–28 represented medium intent, and a score of 29 or higher signified high intent.

Once data collection was completed, the information was entered into Microsoft Excel and analyzed using SPSS version 25. The Chi-square test was applied to assess associations between different risk factors and the severity of suicidal intent, helping to identify key determinants of suicide risk in the context of the COVID-19 pandemic. The study's findings will contribute to the development of targeted interventions for suicide prevention during public health crises.

RESULT

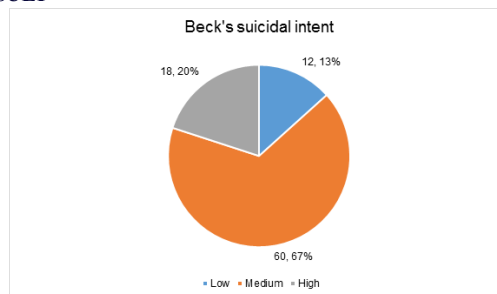


Figure 1: Beck's Suicide Intent Among Study Participants

The suicide prevention clinic in the psychiatric OPD saw 90 patients. They were sent to the clinic by several departments that admit patients who had made an attempt for suicide. Out of 90 patients; majority had medium intent for suicide (60,67%) and 18 (20%) had high intent for the suicide according to Beck's suicide intent classification as seen in figure 1.

Table 1: Socio-demographic variables present among study participants

Socio-Demographic variable		Frequency	Percentage
AGE (Years)	<=20	11	12.2%
	21-40	66	73.3%
	>=41	13	14.4%
GENDER	Male	50	55.6%
	Female	40	44.4%
MARITAL STATUS	Married	45	50.0%
	Unmarried	35	38.9%
	Separated	5	5.6%
	Divorced	5	5.6%
TYPE OF FAMILY	Joint	23	25.6%
	Nuclear	66	73.3%
	Expanded	1	1.1%
RELIGION	Hindu	69	76.7%
	Muslim	19	21.1%
	Christian	2	2.2%
EDUCATION	Secondary	34	37.8%
	Higher Secondary	21	23.3%
	Graduate	9	10.0%
	Dropout	26	28.9%
SOCIOECONOMIC STATUS	Upper	1	1.1%
	Middle	21	23.3%
	Lower	68	75.6%
OCCUPATION	Employed	51	56.7%
	Unemployed	25	27.8%
	Daily Wage Worker	14	15.6%

As per table 1 and table 2; majority of study participants were age between 21 to 40 years among. High suicide intent was seen among 21 to 40 years age of patients followed by age more than 40 years however, the association for age and suicide intent was not significant. Present study included 50 male and 40 female study participants. Suicide intent was equally present in both gender. Person who are married or unmarried had similar intent for suicide level. Out of 90, majority (66) participants were living in nuclear family and 23 live in joint family. There was no significant difference found between Suicide intent and type of family person is having. Education and Socio-economic status is not associated with suicide intent severity of the patients however; person who is unemployed and work on daily wage had high suicide intent compared to person with secure job. There was significant association found with person's occupational status and suicide intent.

Table 2: Association Of Suicide Intent With Socio-demographic Variable Of The Study Participants.

Socio-demographic variable		Beck's intent scale			Chi-square value	p value
AGE (Years)	<=20	Low	Medium	High	3.85	0.43
		27.30%	63.60%	9.10%		
	21-40	7	46	13		
		10.60%	69.70%	19.70%		
	>=41	2	7	4		
		15.40%	53.80%	30.80%		
GENDER	Male	6	34	10	0.18	0.91
		12.00%	68.00%	20.00%		
	Female	6	26	8		
		15.00%	65.00%	20.00%		
MARITAL STATUS	Married	5	30	10	10.7	0.09
		11.10%	66.70%	22.20%		
	Unmarried	7	25	3		
		20.00%	71.40%	8.60%		
	Separated	0	3	2		
		0.00%	60.00%	40.00%		
	Divorced	0	2	3		
		0.00%	40.00%	60.00%		
TYPE OF FAMILY	Joint	2	18	3	2.5	0.64
		8.70%	78.30%	13.00%		
		15.20%	62.10%	22.70%		
	Nuclear	10	41	15		
		15.20%	62.10%	22.70%		
	Expanded	0	1	0		

RELIGION	Hindu	0.00%	100.00%	0.00%	3.21	0.52
		11	44	14		
		15.90%	63.80%	20.30%		
	Muslim	1	15	3		
		5.30%	78.90%	15.80%		
	Christian	0	1	1		
EDUCATION	Secondary	0.00%	50.00%	50.00%	5.53	0.47
		3	24	7		
		8.80%	70.60%	20.60%		
	Higher Secondary	3	13	5		
		14.30%	61.90%	23.80%		
	Graduate	3	6	0		
		33.30%	66.70%	0.00%		
	Dropout	3	17	6		
SOCIOECONOMIC STATUS	Upper	0	1	0	1.11	0.89
		0.00%	100.00%	0.00%		
		3	15	3		
	Middle	14.30%	71.40%	14.30%		
		9	44	15		
	Lower	13.20%	64.70%	22.10%		
OCCUPATION	Employed	7	38	6	13.56	0.09*
		13.70%	74.50%	11.80%		
		5	10	10		
	Unemployed	20.00%	40.00%	40.00%		
		0	12	2		
	Daily Wage Worker	0.00%	85.70%	14.30%		

Table 3: Psychosocial Variables Present Among Study Participants

PSYCHO-SOCIAL VARIABLES	FREQUENCY	PERCENTAGE
SYMPTOMS AFTER COVID 19 PANDEMIC	58	64.4%
WERE YOU FEELING LOW AND HAVING SUICIDAL THOUGHTS DUE TO FINANCIAL CRISIS	37	41.1%
WERE YOU FEELING LONELY DURING PANDEMIC	27	30.0%
WERE YOU SUFFERING FROM ANY PSYCHOLOGICAL DISORDER DURING COVID 19 PANDEMIC	25	27.8%
WERE YOU VICTIM OF DOMESTIC ABUSE	17	18.9%
DO YOU FEEL YOU HAD EASY ACCESS TO POISONOUS SUBSTANCE DUE TO COVID 19 PANDEMIC	12	13.3%
DO YOU HAD RELAPSE OF PAST PSYCHIATRIC ILLNESS	9	10.0%
WERE YOU FEELING PANIC, FEAR AND UNCERTAIN BECAUSE OF UNKNOWN NATURE OF COVID 19	6	6.7%
DID ANY OF YOUR FAMILY MEMEBERS TRIED OR DIED OF SUICIDE	5	5.6%
DO YOU OR YOUR FAMILY MEMBERS FACED STIGMA AND DISCRIMINATION DUE TO COVID 19 INFECTION	1	1.1%

As seen in table-3 and table 4; 27 study participants had feeling of loneliness. Out of 27 study participants with loneliness feeling 37% had high intent for suicide and there was a significant association found between suicide intent and feeling of loneliness perceived by study participants. Only 6 study participants had depicted their feeling of panic and fear for COVID-19 and there was no association found for suicide intent and feeling of panic or fear of COVID 19 pandemic. Domestic abuse history was positive in 17 study participants though suicide intent was equally distributed with negative history of domestic abuse. Person's financial crisis, stigma and discrimination faced due to COVID infection, psychological suffering during COVID pandemic period, and easy access to poisonous medicine and family history of suicidal death does not significantly associated with person's suicide intent severity. Out of 9 participants who had relapse of past psychiatric illness 67% had high intent on suicide and there was significant association found between suicide intent and relapse of past psychiatric illness in study participants.

Table 4: Association Of Suicide Intent With Psycho-social Variable Of The Study Participants.

Psycho-social variables		Beck's intent scale			Chi Square value	P value
		Low	Medium	High		
SYMPTOMS AFTER COVID 19 PANDEMIC	Present	8 13.80%	35 60.30%	15 25.90%	3.8	1.14
	Absent	4 12.50%	25 78.10%	3 9.40%		
WERE YOU FEELING LONELY DURING PANDEMIC	Yes	2 7.40%	15 55.60%	10 37.00%	7.32	0.026*
	No	10 15.90%	45 71.40%	8 12.70%		
WERE YOU FEELING PANIC, FEAR AND UNCERTAIN BECAUSE OF UNKNOWN NATURE OF COVID 19	Yes	1 16.70%	3 50.00%	2 33.30%	0.89	0.64
	No	11 13.10%	57 67.90%	16 19.00%		
WERE YOU VICTIM OF DOMESTIC ABUSE	Yes	2 11.80%	12 70.60%	3 17.60%	0.14	0.93
	No	10 13.70%	48 65.80%	15 20.50%		
WERE YOU FEELING LOW AND HAVING SUICIDAL THOUGHTS DUE TO FINANCIAL CRISIS	Yes	4 10.80%	22 59.50%	11 29.70%	3.76	0.15
	No	8 15.10%	38 71.70%	7 13.20%		
DO YOU OR YOUR FAMILY MEMBERS FACED STIGMA AND DISCRIMINATION DUE TO COVID 19 INFECTION	Yes	0 0.00%	1 100.00%	0 0.00%	0.5	0.77
	No	12 13.50%	59 66.30%	18 20.20%		
WERE YOU SUFFERING FROM ANY PSYCHOLOGICAL DISORDER DURING COVID 19 PANDEMIC	Yes	2 8.00%	15 60.00%	8 32.00%	3.46	0.17
	No	10 15.40%	45 69.20%	10 15.40%		
DO YOU FEEL YOU HAD EASY ACCESS TO POISONOUS SUBSTANCE DUE TO COVID 19 PANDEMIC	Yes	1 8.30%	7 58.30%	4 33.30%	1.63	0.44
	No	11 14.10%	53 67.90%	14 17.90%		
DO YOU HAD RELAPSE OF PAST PSYCHIATRIC ILLNESS	Yes	1 11.10%	2 22.20%	6 66.70%	13.8	0.01*
	No	11 13.60%	58 71.60%	12 14.80%		
DID ANY OF YOUR FAMILY MEMEBERS TRIED OR DIED OF SUICIDE	Yes	1 20.00%	4 80.00%	0 0.00%	1.37	0.5
	No	11 12.90%	56 65.90%	18 21.20%		

DISCUSSION:

In the present study, male participants were found to have a higher representation among those who attempted suicide compared to females. A similar trend was observed by Ponnudurai et al.[18], who assessed a comparable group over a one-year period, where male participants predominated. However, this finding contrasts with the observations of Lal and Sethi[19], who reported a higher incidence of suicide attempts among females. Generally, females are more likely to attempt suicide than males. However, during the COVID-19 pandemic, males may have faced greater concerns related to job security and financial pressures due to lockdown restrictions. This stress has been significantly associated with higher intent suicides and may explain the increased number of male suicide attempts during this period.

Narang et al.[20] highlighted that married women and unmarried men are at greater risk of attempting suicide. In our study, half of the participants who attempted suicide were married. Work-related stress was a notable contributing factor to high-intent suicide in our findings. The economic impact of COVID-19 restrictions, including the closure

of industries like entertainment, tourism, and travel, placed substantial financial strain on vulnerable populations.

Merzyk, as cited by Logaraj et al.[21], emphasized that the availability of a poison often determines the substance used in suicide attempts. Our hospital serves an urban population, and while the lethality and type of attempt may depend on the individual's awareness of a substance's fatal potential, this relationship could not be established in our study.

Five participants in our study reported a positive family history of suicide, with most exhibiting medium suicidal intent. Venkoba Rao[22], in his hospital-based research, reported that approximately 20% of individuals who attempted suicide had a family history of such attempts. According to Badrinarayana[23], a family history of suicide is a risk factor for completed suicide, highlighting the need for additional care in this group.

Globally, the COVID-19 pandemic has posed a significant mental health challenge. High suicidal intent has often been associated with mental illness or the recurrence of pre-existing psychiatric disorders. Jain et al.[24] noted a strong connection between depression and suicidal attempts, with high suicidal intent observed in this group. Our study, however, did not classify psychiatric conditions to assess their relationship with suicide intent.

Loneliness[25], stemming from social isolation or inadequate social support, has been linked to suicidal ideation and attempts, as it fails to satisfy the basic human need for belonging. Factors such as hopelessness, stigma, and discrimination during the COVID-19 pandemic were also recognized as contributing to suicide attempts. However, their association with the level of suicidal intent was not statistically significant in our study.

Study Limitations: During the pandemic, we utilized a convenience sampling method, which may have introduced bias and limited the generalizability of our findings. The use of self-reported data through interviews might have led to recall bias, potentially affecting the accuracy of the results. As this was an analytical study, our aim was to identify associations between variables. However, establishing causality requires more robust longitudinal studies, given that suicide is a complex phenomenon influenced by a multitude of factors beyond those examined in this study.

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