



Joblessness and Suicidal Ideation Amidst COVID-19 Pandemic: A Cross-Sectional Pilot Survey in Bangladesh

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Abstract

Background: The COVID-19 pandemic has led to an unprecedented rise in unemployment and job-losses because of restrictions on movement and business operations. Joblessness plays a role in the development of mental health issues and it is rapidly growing in Bangladesh due to COVID-19 pandemic. Additionally, suicide rates have devastatingly increased during periods of pandemic, economic distress and increasing joblessness conditions. The port-city (Chittagong) of Bangladesh had recorded its highest job-losses in the decades.

Objectives: The present study aimed to investigate the prevalence and factors of suicidal ideation among the individuals who have lost their jobs during the COVID-19 pandemic.

Methods: A face-to-face survey was held in port-city Chittagong between October 2020 to December 2020. This study employed a cross-sectional design on a sample of 393 individuals (>18 years). Data were collected on socio-demographics characteristics, economic abilities and suicidal ideation due to job-losses.

Results: Among 393 respondents 28.2% were female and 71.8% male (SD=8.912). A majority (59.8%) of the respondents belong to the lower class. A large number (58.26%) of the respondents have suicidal ideation. The potentials risk factors found in the present study included being lower economic status, middle-age, indebted, one earning member in the family and experiencing financial hardship.

Conclusion: High-level suicidality has been noticed in the study which is very alarming for public health. Job-losses have been marked as a key factor for suicide-ideation among individuals. Effective and appropriate strategies should be taken before another public health emergency of suicide could happen.

Keywords: COVID-19 pandemic; Economic downturn; Job losses; Port-city Chittagong; Financial hardship; Suicidal ideation

Introduction

The Coronavirus Disease-2019 (COVID-19) pandemic has impacted the everyday lives of people of all ages. While restricting social interactions is necessary to prevent COVID-19 from spreading, the negative consequences have been felt most acutely by job holders and daily wagers, who are particularly vulnerable to financial challenges. The pandemic's effects cut across many sectors, including relational and financial problems [1].

Bangladesh, a south Asian developing country is experiencing its worst time due to COVID-19 pandemics and its devastating nature in this country. Currently, there are 715,252 confirmed cases and 10,283 deaths till April 17th, 2021 [2]. The pandemic response has resulted in an economic collapse, causing stressors such as job loss and financial hardship [3]. Bangladesh economy has been intensely hit by COVID-19 lockdown measures and many more lost their jobs and livelihood [4]. According to World Bank report, an average 68% people lost their jobs during COVID-19 pandemic

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in Dhaka (71%) and Chittagong (59%) city [5].

COVID-19 has driven many people around the globe to worry about economic uncertainty and financial difficulties. A number of research findings, including Bangladesh and Pakistan, stated that individuals died unexpectedly from fear of COVID-19 infection, social stigma, isolation, anxiety, depression, emotional distress as well as economic breakdown, financial and job insecurities [6-8]. Almost every country took lockdown measures and the lockdown imposed by the state stopped the flow of the economy [9]. The United States was therefore expected to see a stronger economic recession as a result of this current pandemic than COVID-19 itself, as unemployment has risen sharply (4.6 million) during this outbreak [10]. Implementing division and quarantine hinders daily social life and causes psychological fear and an indefinite feeling, leading to suicides for poorest citizens [11,12]. In addition, pandemic related restraints (e.g., spatial distancing, isolation, home quarantine, etc.) is impacting on economic sustainability and well-being which may induce psychological mediators such as worry, fear, anger, annoyance [8,12]. While loss of jobs rise and people become more isolated at home, the coronavirus crisis creates a perfect storm for suicidal ideation [13]. Without early economic interventions, such as mental health issues can facilitate Suicidal Ideation (SI) among some individuals. However, suicide in Bangladesh is a complex, multi-caused but massive, preventable concern for public health [14,15]. SI includes a wide range of conduct, including suicidal behaviors, planning for it, attempting, and completing [16]. This is an unexpected public health issue to address in Bangladesh which is currently in progress [17]. This is the second leading cause of death in Bangladesh following motor vehicle accidents- among teenagers and young adults in Bangladesh [14]. But due to this pandemic suicide has become a precedent form of mortality. During and following the COVID-19 outbreak and the outcomes of isolation and quarantine, a number of suicide and suicidal behavior among at-risk populations are observed. The social and economic compensation impacts will likely have a profound impact on many worldwide mental health and suicidality [18]. In Bangladesh, cases of suicide due to poverty caused by lockdown related job losses have become headlines [19].

There is evidence that suicide deaths will rise during an outbreak of infectious diseases. In the United States, for example, during the 1918-19 influenza pandemic suicidal deaths increased [20] and during the 2003 Severe Acute Respiratory Syndrome (SARS) outbreak in Hong Kong [21]. In addition, more alarming news is that in last 10-month COVID-19 took only 5,000 lives but suicide cause 11,000 lives [22]. Additionally, people living in southern part (Chittagong) are more likely to commit suicide in Bangladesh [23]. Based on the expected consequence of the current pandemic, suicide ideation and people's suicide risk need to be examined. This may aid in the development of measures and the implementation of psychological interventions that are tailored to the current pandemic situation (including COVID-19 misinfodemics) as well as those that follow it [24].

However, there is a dearth of knowledge how COVID-19 escalates mental health issues in Bangladesh specially those who lost their jobs and how SI develops among them. The present study aimed to investigate suicidal ideation among the people who have losses their jobs due to COVID-19 on Chittagong of Bangladesh.

Methods

Study design

A cross-sectional design was utilized in this study enrolling 393

individuals from the southern part (Chittagong city) of Bangladesh by face-to-face interview. Data were collected using a semi-structured and self-reported survey questionnaire. The language of the survey questionnaire was Bangla as it's the native language of the respondents and later the questionnaire was translated back into English. In the informed consent, specific mention was made of COVID-19 and our interest to assess suicide ideation concerning the COVID-19 outbreak.

Participants and procedure

Data were collected from Karnafully Upazila, Anwara Upazila, Panchlaish Upazila, Bandar Upazila and Chandhnaish Upazila respectively from Chittagong district. These areas was purposively selected for the study as because of being (i) industrial area, (ii) large number of people lost their jobs on this area [25,26]. And (iii) being suicidal prone area [23] purposive sampling technique was utilized in this study. However, individuals terribly suffering from mental conditions after losing job were given prioritized during data collection.

Data were collected from October to December 2020 by maintaining physical distance and others precautions suggested by WHO for COVID-19. The inclusion criteria of this study were (i) the respondents must have lost their jobs during COVID-19 pandemic and (ii) living in Chittagong division. Individuals with mental or physical concerns and those unwilling to participate were not included in the study.

The sample size was calculated using the following equation:

$$n = z^2 pq/d^2$$

$$\Rightarrow n = 1.96^2 \times 0.5 \times (1-0.5)/0.05^2$$

$$\Rightarrow n = 384.16 \approx 384$$

Here,

n = number of samples

z = 1.96 (95% confidence level)

p = prevalence estimate (50% or .5) (as no study found)

q = (1-p)

d = precision limit or proportion of sampling error (.05)

Socio-demographic measures

Socio-demographic data were collected during the survey including gender (male/female), age (youth >18 years, middle age 25 to 49, upper age <50), family type (nuclear/extended), earning members of the family (one/more than one) monthly family income, education (primary/secondary) and occupation (before pandemic) (job/business/daily wagger). The socio-economic status (before pandemic) of the respondents was classified into three categories: Lower-class, middle-class, and upper-class were based on a monthly family income respectively of less than 15,000 Bangladeshi Taka (BDT), 15,000-30,000 BDT, and more than 30,000 BDT [27].

Financial distress and suicide ideation measures

Financial distress and suicide ideation were measured by the following questions, are you satisfied with your income before COVID-19, Does COVID-19 fell you in indebtedness?, are you afraid of future financial distress?, are you in frustration of facing worst future if COVID-19 continues? Did you ever planned to suicide after

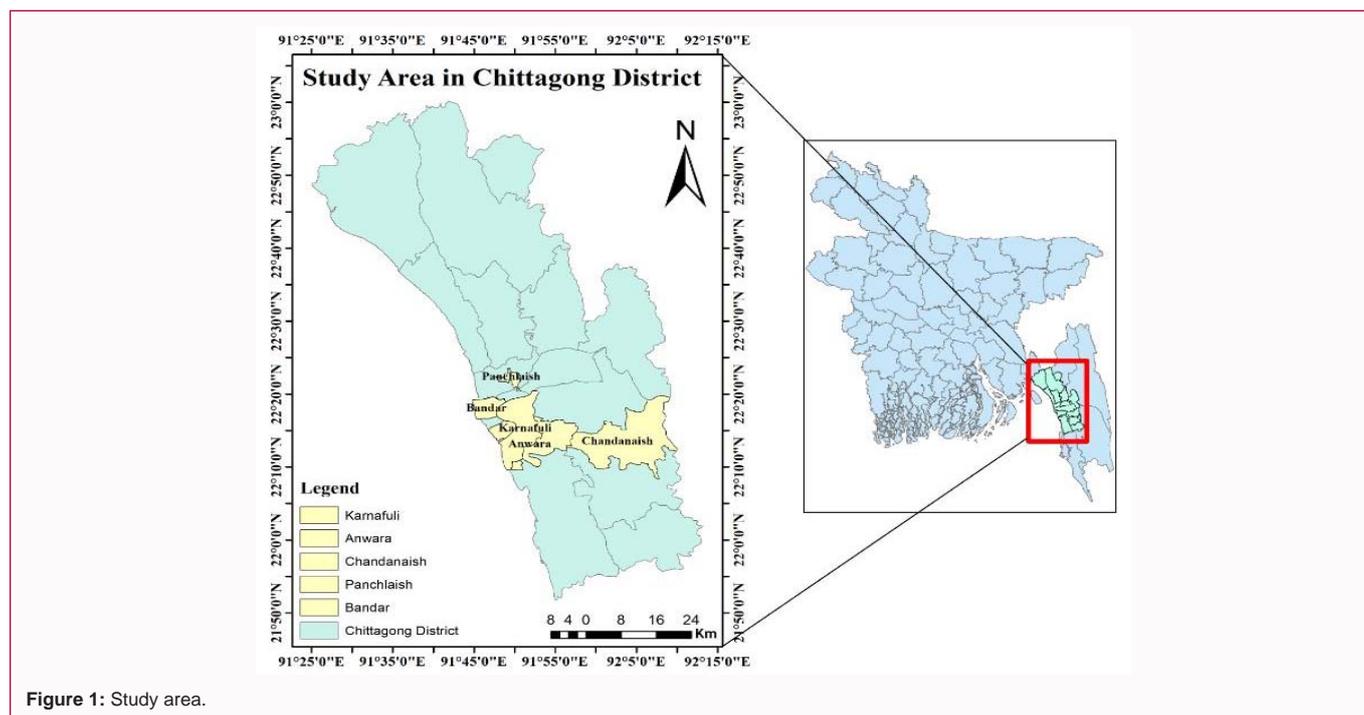


Figure 1: Study area.

losing your job? No specific SI screening tools used to measure SI rather the present variables were recruited from a recent published article [28].

Statistical analysis

Data analysis was performed using SPSS v.25. Descriptive statistics (frequencies, percentages, means, and standard deviation) and first-order analysis (i.e., chi-square tests) were executed using SPSS software. The association of variables was considered statistically significant if the two-sided p-value was less than or equal to 0.05. Logistic regression estimates were performed to determine significant relations among the variables.

Ethical considerations

The study was conducted following the Institutional Research Ethics and The Code of Ethics of the World Medical Association (Declaration of Helsinki). In addition, formal ethics approval was granted from the respective authorities before starting data collection. Moreover, the purpose of this study was clearly documented in the first phase of the questionnaire along with, i) the procedures of the current study, ii) data confidentiality and anonymity, and iii) freedom to withdraw data from the study at any moment.

Results

Socio-demographic characteristics

Among 393 respondents, 71.8% (282) were male and 28.2% (111) were female and the average age was 33.10 ± 0.450 and $SD=8.912$, ranges from 20 to 60 years. Table 1 presents descriptive statistics for all the variables. The majority of the respondents was from lower-class groups (59.8%), had primary education (78.1%), worked as day labor (39.2%), came from nuclear families (53.2%) and had only one earning member in their family (67.2%). Most of the people (64.4%) were satisfied with their income before the pandemic and 75.3% (296) of the respondents became indebted during the countrywide lockdown. While a huge portion of the people 75.4% (297) were

frustrated about their future and future harmful situation (81.2%).

Suicidal Ideation

Among 393 people, who responded to the survey, 58.26% reported to experienced suicidal ideation during COVID-19 outbreak. The proportion of individuals with suicidal ideation during COVID-19 outbreak were higher in, i) respondents from upper class versus middle class (100.0% vs. 54.7%, $p=0.001$), ii) middle aged respondents vs. aged respondents (61.5% vs. 36.0%, $p=0.037$), iii) respondents with primary versus secondary education (61.9% vs. 45.3%, $p=0.006$), v) day labor versus rickshaw puller (65.8% vs. 34.9%, $p=0.001$), vi) more than one earning member versus only one earning member in the family (67.4% vs. 53.4%, $p=0.008$), v) respondents with versus without income satisfaction before lockdown (62.5% vs. 50.7%, $p=0.023$), vi) indebted versus not indebted (61.1% vs. 48.5%, $p=0.033$), vii) respondents who were frustrated versus not frustrated about their future (61.5% vs. 48.5%, $p=0.024$), viii) respondents with versus without the fear of future harmful situation (61.8% vs. 43.2%, $p=0.004$), ix) respondents with vs. without suicidal thoughts (13.2% vs. 86.7%, $p=0.035$).

Potential risk factors for suicidal ideation

Table 2 describes the findings of univariate analyses of logistic regression. Risk factors for suicidal ideation included primary educated people vs. secondary educated people (OR suicidal ideation =0.488; 95% CL = 0.300- 0.791, $p=0.004$), respondents doing job vs. business (OR suicidal ideation =0.338; 95% CL= 0.182-0.625, $p=0.001$), respondents having one earning member versus more than one earning member in their family (OR suicidal ideation =1.807; 95% CL= 1.163-2.807, $p=0.008$), respondents satisfied with their income versus not (OR suicidal ideation =0.629; 95% CL= 0.414-0.955, $p=0.030$), indebted respondents vs. not (OR suicidal ideation =0.597; 95% CL= 0.376-0.948, $p=0.029$), fear of future harmful situation versus not (OR suicidal ideation =0.478; 95% CL= 0.286-0.794, $p=0.005$) and thinking about suicide (OR suicidal ideation

Table 1: Distribution of demographic characteristics and suicidal thoughts of the participants (N=393).

Variable	Total (393); n (%)	Suicidal Ideation (229, 58.26%)			
		Yes; n (%)	X ² test value	df	p-value
Socio-demographics					
Gender					
Female	111 (28.2)	70 (63.1)	1.462	1	0.227
Male	282 (71.8)	159 (56.4)			
Socio-economic status					
Lower class	235 (59.8)	133 (56.6)	14.581	2	0.001
Middle class	139 (35.4)	76 (54.7)			
Upper class	19 (4.8)	19 (100.0)			
Age groups					
Youth (>18)	108 (27.5)	60 (55.6)	2	2	0.037
Middle Age (26-50)	260 (66.2)	160 (61.5)			
Upper age (50+)	25 (6.4)	9 (36.0)			
Education					
Primary	307 (78.1)	190 (61.9)	7.559	1	0.006
Secondary	86(21.9)	39 (45.3)			
Occupation (before pandemic)					
Job	145 (36.9)	89 (61.4)	18.24	3	<0.001
Business	31 (7.9)	17 (54.8)			
Day Labor	154 (39.2)	101 (65.8)			
Rickshaw puller	63 (16.0)	22 (34.9)			
Family Type					
Nuclear	209 (53.2)	120 (57.4)	0.77	1	0.68
Extended	184 (46.8)	107 (58.5)			
Earning Member of the family					
One	264 (67.2)	141 (53.4)	7.006	1	0.008
More than one	129 (32.8)	87 (67.4)			
Income Satisfaction before COVID-19					
Yes	253 (64.4)	158 (62.5)	5.115	1	0.023
No	140 (35.6)	71 (50.7)			
Become indebted in COVID-19					
Yes	296 (75.3)	181 (61.1)	4.834	1	0.033
No	97 (24.7)	47 (48.5)			
Future frustration if COVID-19 Continues					
Yes	297 (75.4)	182 (61.5)	5.103	1	0.024
No	96 (24.6)	47 (48.5)			
Afraid of future financial hardship situation					
Yes	319 (81.2)	197 (61.8)	8.466	1	0.004
No	74 (18.8)	32 (43.2)			
Thinking about suicide after losing job					
Yes	52 (13.2)	39 (75)	6.84	1	0.035
No	341 (86.7)	190 (55.7)			

=0.569; 95% CL= 0.409-.913, p=0.04).

Discussion

According to couple of studies, suicidal ideation rises during infectious disease outbreaks [21,29]. In addition, suicide has also

been found to be significantly associated with COVID-19-specific concerns [30]. However, the COVID-19 pandemic has taken a heavy toll on lives all over the world and influenced the mental and financial wellbeing of people. Individuals who are jobless due to COVID-19 restrictions are at elevated risk for severe psychological conditions

Table 2: Regression analysis (unadjusted and adjusted estimates) by Suicidal ideation of the participants.

Variables	Suicidal Ideation					
	Unadjusted estimates			Adjusted estimates		
	Unadjusted Odds Ratio (aOR)	95% CI	p-value	Adjusted Odds Ratio (aOR)	95% CI	p-value
Gender						
Male	1.34	(0.853-1.105)	0.204	1.254	(0.520-3.024)	0.615
Female	Reference					
Socio-economic status (before pandemic)						
Lower class	Reference		0.937	Reference		0.063
Middle class	1.081	(0.709-1.648)		2.377	1.155-4.894	
Upper class	<0.001	<0.001		<0.001	<0.001	
Age groups						
Lower age (1-25)	0.45	(0.183-1.107)	0.051	0.423	(0.138-1.296)	0.037
Middle Age (26-50)	0.357	(0.152-0.839)		0.3	(0.115- 0.788)	
Upper age (50+)	Reference			Reference		
Education						
Primary	0.488	(0.300-0.791)	0.004	0.433	(0.231-0.811)	0.009
Secondary	Reference			Reference		
Occupation (before pandemic)						
Job	0.338	(0.182-0.625)	0.001	0.283	(0.104-0.770)	0.001
Business	0.442	(0.184-1.062)		0.343	(0.115-0.788)	
Day Labor	0.29	(0.157-0.536)		0.227	(0.109-0.470)	
Rickshaw puller	Reference			Reference		
Family Type						
Nuclear	0.798	(0.705-1.575)	0.798	0.792	(0.462-1.357)	0.396
Extended	Reference			Reference		
Earning Member of the family						
One	1.807	(1.163-2.807)	0.008	2.498	(1.106-5.639)	0.028
More than one	Reference			Reference		
Income Satisfaction before COVID-19						
Yes	0.629	(0.414-0.955)	0.03	0.421	(0.252-0.705)	0.001
No	Reference			Reference		
Become indebted in COVID-19						
Yes	0.597	(0.376-0.948)	0.029	1.071	(0.622-1.844)	0.805
No	Reference			Reference		
Future frustration if COVID-19 continues						
Yes	0.598	(0.376-0.948)	0.597	0.465	(0.265-0.815)	0.007
No	Reference			Reference		
Afraid of future financial hardship situation						
Yes	0.478	(0.286-0.794)	0.005	0.52	(0.286-0.945)	0.032
No	Reference			Reference		
Thinking about suicide after losing job						
Yes	0.569	(0.401-0.913)	0.04	0.413	(0.612-0.715)	0.003
No	Reference			Reference		

*Bold values indicate significant variables at 5% significance level

*aOR-Unadjusted Odds Ratio

*CI-Confidence Interval

and suicidal ideations.

To the best of the author's knowledge, this is the first study conducted in Bangladesh that reveals COVID-19 related SI among

the individuals who have lost their jobs during and due to COVID-19 outbreak in Bangladesh. Logistic regression analysis shows that SI was significantly associated with socioeconomic status, age, education,

occupation, earning member of the family, income satisfaction before COVID-19, being indebted in COVID-19, future frustration, financial hardship situation, and previous suicide attempts history.

The present study revealed 58.26% SI among the respondents due to job looseness in the COVID-19 pandemic. However, using the same variables a prior study conducted on the university students early on the pandemic in the same country found only 12.8% SI [28]. Another study conducted in the same country found 19.0% SI among the populations [24]. A New Zealand study reported only 6% SI among their general populations [31]. However, from the above-mentioned studies, the prevalence of SI is higher in the present study which maybe because of the target group. As we know, job losses in the COVID-19 predispose individuals largely to suicide [31].

The present study found higher SI among female than male in this study, which is align with a recent study where the ideation of suicide was high among females [32]. A study among rural adolescence found similar findings that females had greater SI than males [33]. An analysis in Bhutan found, female gender was associated with higher suicidal ideation [34], which also represents the current investigation. This study showed that SI was substantially associated with the lower class respondents have a high risk of suicide, align with different studies in Bhutan, another Asian country, reported living in low or middle socioeconomic status were significantly associated with suicidal ideation [34], a study conducted among male also match the present findings [35].

Prevalence of suicide was high among adolescence of Bangladesh, found in a pre-COVID-19 study [33] but the present findings revealed that middle-aged (25 to 50) are more vulnerable to SI during the pandemic period because these aged people are the contributor of their family and being jobless at the time made them hopeless and influenced for suicide. Again individuals, who were satisfied with their income before lockdown, showed higher suicidal ideation in the present, study which because the income of them has been disrupted by COVID-19 outbreak, which can be aligned with a prior study among male [35]. Respondents who are being indebted to the pandemic are highly susceptible to SI found in the present study. Some prior studies also reveal similar findings like a study in Japan found poverty and unemployment increasing and people become indebted and developing SI [36], another study from the USA reveals the similar findings [3]. Besides, a review article revealed that pandemic-related economic downturns posed to individuals to SI [37]. Future frustration if the situation (COVID-19 pandemic) continues and SI were significantly associated in a Nigerian study [38]. Respondents who had the fear of future financial hardship situation found to be showing significant SI in the present study. Prior studies conducted in a similar epidemiological context and other countries reported that individuals suffering from financial hardship are more prone to SI and suicide [6,11,39]. The present study found (13.2%) attempts to suicide history among the respondents which are higher than a prior study (6.6%, conducted on university students) in Bangladesh [28]. Another study from Bhutan conducted among adult populations found 0.7% suicide attempts history [34]. The present suicide attempts history is somewhat higher than some previous studies conducted among students across the world like (2.8%) in China (41), (4.4%) in Ethiopia (42), (7.1%) in Turkey [42].

This study examined suicidal ideation among jobless people in Bangladesh after the first wave of the COVID-19 outbreak. The study reported a high prevalence of suicidal ideation, raising the prospect

that COVID-19 is having psychological and physiological effects on those who have lost their jobs. Associations with socioeconomic and potential risk and protective factors aligned and somewhat different with previous studies because of (i) different socio-characteristics, (ii) different study populations, and (iii) different study time. A daily routine involving adequate sleep and appropriate exercise, economic intervention, community support, engaging in relaxing and social activities, making/taking personal time, and staying informed about current health information are some general recommendations for better mental health and to avoid Suicide Ideation.

Limitations and Recommendations

It's necessary to be mindful while considering the study as every study has some limitations and the present study isn't beyond it. Firstly, since the study is cross-sectional, causality could not be identified. Secondly, self-report tests were used, which have potential biases in terms of social desirability and declarative memory, among other items. Thirdly, the study has geographical limitations and is held in a single city, thus, it could not represent the whole country. Non-suicidal self-injury, another significant factor linked to suicidal ideation and behavior, was not evaluated in this study and future research should include it. However, a longitudinal study is required for a better understanding of the suicide ideation of this vulnerable group.

Conclusion

The present study revealed a remarkable prevalence of suicide ideation among the respondents which is alarming. These findings could help people with suicidal ideation get better support to control their actions, particularly those (respondents with extreme suicidal behavior), who are at higher risk of concern. Giving them community support and help lines will help to relieve their suffering from unemployment and suicidal ideation.

Author's Contribution

MMH and MSHS conceptualized and design the study. MSHS and ABS performed statistical analysis. MMH, MSHS, RT, ABS, MA, MAI wrote original draft. SM edited and revised the draft. MMH and MSHS contributed equally.

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