

# Covid-19 and Lockdown: Socio-psychological Effects in Pakistan

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**Abstract:** This study aimed to investigate the psychological effects of COVID-19 in the context of lockdowns by capturing an immediate response in the first month of the outbreak. A cross-sectional survey questionnaire was used to collect data from 45 distinct districts across the country. The collected data was analyzed on Smart PLS using Structural Equation Modelling (SEM). The results revealed that trust and belief in the government have more contribution to the mental state of society during the lockdown. Moreover, father's education has also played a significant role in mitigating the fear of job loss.

**Keywords:** : COVID-19; Mental state; Psychology; Fear; Satisfaction

## 1. Introduction

World Health Organization (WHO) has declared COVID-19 a pandemic as a consequence of speedy global spread and alarming capability to rapidly overwhelm the healthcare services in the context of patients needing critical care [1]. The virus has now spread to almost every country (211 countries and territories) on the global map [2]. Social distancing, self-isolation, fear of transmission, closure of businesses, and educational institutes have changed the current living arrangement due to the COVID-19 outbreak. This situation has a profound psychological as well as social consequences. The contemporary societies are extremely vulnerable in terms of psychological outcomes associated with COVID-19 [3]. The literature in epidemiology has already recognized a well-established impact of the disease on the behavior and psychology of the individuals [4]. Fear and anxiety in the patients of COVID-19 have already been observed [5]. As many of the researchers argued that outbreaks are known for disturbing societal psychology [6]. Theories of perceived social isolation, which is defined by physical separation from others, have shown that it can result in negative emotions (e.g. anger, sadness, low mood), decreased levels of arousal in extroverts and those who prefer to stay around individuals and even decline in cognitive abilities [7]. Although, there are very few studies that assessed the psychological outcome of COVID-19 but the evidence of mental state on job loss, the impact of life satisfaction on mental state, the impact of life satisfaction on job loss about COVID-19 remains a mystery. Since the world is facing this challenge, thus, there is a dire need to study such outcomes especially in low-income countries or countries where the happiness index is extremely low such as Pakistan. This study will evaluate the impact of COVID-19 induced lockdown on mental state, life satisfaction, and fear of job loss in Pakistan which can also help in corrective measures for the policymakers.

## 2. Materials and Methods

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### 2.1. Sample and data collection

Pakistan started implementing the COVID-19 control measures on February 28, 2020, when it closed its borders for Iran followed by suspending flights from China Since March 1st, 2020, resulting in a partial lockdown across the country. The survey was conducted during the last week of March and the first week of April, which aimed to collect the early psychological impact. Keeping in view the safety of the respondents and respecting the initiatives taken by the Government to control COVID-19, the study was conducted online. An online survey has also been used to collect the responses of respondents effectively by other studies [8]. Pakistan has four provinces (Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan), two autonomous bodies (Gilgit Baltistan and Azad Kashmir), and one administrative body (Islamabad Capital Territory) containing 154 distinct districts. The respondents were diversely located and belonged to 48 distinct districts.

The snowball sampling technique was used to collect the data. The anonymous questionnaire was floated among students and working-class located in Islamabad Capital Territory and they were encouraged to pass it on. In addition to this, we approached people residing in all the provinces in Pakistan, electronically, and requested them to float the questionnaire further for wider area coverage. During two weeks of data collection, 560 responses were collected. The data was cleaned for missing responses, duplicates and randomly selecting a balanced mix of males and females. Therefore, a sample of 428 responses is used in this study for data analysis which is nationally representative with a 5% margin of error and 95% confidence. Around 3% of respondents belonged to Gilgit Baltistan, around 25% from Islamabad Capital Territory, 5% from Khyber Pakhtunkhwa, 60% from Punjab, and 7% from Sindh.

### 2.2. Measurements

Mental state has been operationally defined as mental state measured through fear, stress, and trust. Lesser fear, stress, and more trust will create a mentally stable state and will contribute towards mental state. Fear has been measured through the danger of getting harm and discrimination, which affects mental state [9]. The evident symptoms of depression and stress are mood swings [10]. Laziness is also linked to stress and depressive disorders [11]. Lack of trust is also associated with stress [12]. The construct of mental state based on literature has been operationalized and has three 3 items of fear (3 dimensions), stress (3 items), and trust (8 items). Fear is measured on Depression Anxiety Stress Scale (DASS) [13]. Stress and trust have been measured on a Likert scale [14].

The construct of satisfaction is based on evaluative judgment on respondents and belief. Belief is a notion that improves satisfaction [15]. The construct has 9 items and is using a Likert scale for measurement. The respondents were asked about being afraid of losing a job because of the lockdown. The variable is binary in nature. Demographic variables include age, education, household size, living arrangement, labor market status, and parental education. The psychological variables include fear, stress, trust, and satisfaction.

## 3. Results

The demographic profile of the respondents is shown in Table 1.

**Table 1.** Descriptive statistics of the sample.

Variable	Frequency	Percent
<b>Age</b>		
15-25 years	268	62.6
26-35 years	140	32.7
36-45 years	14	3.3
46-55 years	6	1.4
<b>Education</b>		
Matriculation	18	4.2

Intermediate	72	16.8
Graduate	208	48.6
Post-graduate and above	130	30.4
<b>Household size</b>		
One to three persons	43	9.8
Four to six persons	237	55.4
Six plus persons	148	34.6
<b>Living arrangement</b>		
Living in hostile	12	2.8
Living Alone	384	89.7
Living with Family	32	7.5
<b>Occupation</b>		
Student	219	51.2
Other	51	11.9
Working	158	36.9
<b>Father's education</b>		
Under matriculation	60	14.0
Matriculation/Intermediate	112	26.2
Graduate	151	35.3
Post-graduation and above	104	24.3
Total	428	100.0

The data was analysed on Smart PLS. The results of the measurement model for reliability and validity (see Table 2) were satisfactory according to the threshold interpretations [16]. The AVE >0.50; CR>0.70 and loadings> 0.50. The HTMT ratio test was applied to check the discriminant validity, all the values were <0.85.

Table 2. Measurement model result.

	Father's Education	Fear Job Loss	Satisfaction	Stress	Loadings	CR	AVE	
<b>Father's Education</b>	-							
<b>Fear</b>	0.165				0.60-0.86	0.75	0.51	
<b>Job Loss</b>	0.152	0.1						
<b>Satisfaction</b>	0.111	0.187	0.068		0.50-0.84	0.87	0.50	
<b>Stress</b>	0.093	0.582	0.073	0.141	0.67-0.81	0.81	0.59	
<b>Trust</b>	0.084	0.187	0.075	0.714	0.164	0.53-0.85	0.87	0.51

The structural model is examined through path coefficient and coefficient of determination (R2). The T-statistics value of 0.892 shown in Table 3 indicates an insignificant relationship between mental state and fear of job loss. Similarly, the control variables used in this study: education, and age also show an insignificant impact on the fear of job loss. However, Household size has a significant effect on the fear of job loss. Mediation analysis has been used to understand the causal relationship between exogenous and endogenous variables [17]. The mediation approach used for this study is the segmentation approach that used three hypotheses [18]. The first hypothesis analysis the direct effect of mental state on job loss (H1). The second hypothesis analysis the impact of satisfaction on mental state (H2) and the third hypothesis analyses the impact of satisfaction on the job loss (H3). In Table 3, T-values show that there is no direct relationship between mental state and job loss. Similarly, there is no influence of satisfaction on job loss. Nevertheless, satisfaction has a significant impact on mental state as the T-statistics value is 15.027. In the available literature, complete and partial mediation are viewed to have little value [19]. The total indirect effect must be assessed to conclude the mediation effect [20]. Therefore, it can be concluded that no mediation effect exists in this study's model.

In this study, the two-stage approach was used to analyze the moderation effect. The two-stage approach is deemed to be suitable among all others [21]. Table 3 shows the T-Statistics value of 2.69 for the moderation of father's education between mental state and fear of job loss. It indicates a significant moderation effect.

**Table 3.** Structural model results.

Mediation	Path Coefficients	T-Statistics	P-value	Status
Mental health-> Fear of Job Loss (H1)	-0.061	0.892	0.373	
Satisfaction -> Mental Health (H2)	0.59	15.027	0.00	No mediation
Satisfaction -> Fear of Job Loss (H3)	-0.063	0.955	0.34	
Total indirect effect	-0.036	0.890	0.374	
Moderation				
Fear of Job loss*Father's education	-0.407	2.69	0.007	Significant
Control variables				
Education	-0.039	0.797	0.425	Not significant
Age	0.0082	1.371	0.171	Not significant
Household size	-0.11	2.382	0.017	Significant

### 3. Discussion

This study has investigated the psychological effects of COVID-19 in the context of lockdowns by capturing an immediate response in the first month. Satisfaction has a positive association with mental state. In this pandemic, if people have more belief in the response taken by their system then they are more satisfied. The factor loadings show that belief in local, provincial, and federal government explain more than 50% of the variable hence the higher belief in them leading to better satisfaction and improved mental state. The positive and efficient role of the government to make a pandemic response policy is very important and it can improve the mental state of the respondents during this lockdown. These findings have also advanced existing theoretical models on how social disconnectedness impacts mental state and wellbeing of individuals. Although the usage of the present research design did not allow for causal inferences, the findings of the present study have shown that even in a relatively brief time span of isolation, social deprivation could lead to relevant repercussions for individuals' psychological well-being, showing that the longer the isolation, the worse the mental state.

The adverse impact on mental state of individuals which primarily disrupts their cognitions, emotions and decision making can also explain why a decline in trust on the government can lead to negative mental state consequences. It also needs to be considered that the imposed isolation can lead to adverse influences on mental state as it can lead to a reduced sense of perceived control as well as agency especially for those individuals who did not perceive the COVID-19 virus as severely threatening their existence. Accordingly, individuals residing in low contagion areas might show a tendency to perceive the government's restrictions as exaggerated for their current situation and thus do not show trust on the government. Conversely, individuals with higher levels of awareness and those who are living in high contagion regions might have a better understanding about the steps taken by the government.

Father's education is important to affect the fear of job loss. The fear of loss decreases as the father's education increases. In the case of the highly educated father, the respondents may think that they can rely on their father's earnings so their fear of losing a job is less. In this regard, it is noteworthy that the concept of social insurance is strong in Pakistan as young children usually live with their parents. The large household sizes have lower fear of losing a job which may be due to more earners in the family and again this

implies the existence of social insurance. Fear of family being at risk of having disease explains more than 50% variance of the fear. Similarly, laziness due to lockdown explains more than 50% of the stress due to lockdown. People are more concerned about their families which is constituting their mental state. The laziness due to lockdown is also contributing to mental state. Furthermore, trust is also an important factor contributing to mental state. Therefore, the government should focus on public awareness about a healthy lifestyle during these lockdowns.

#### 4. Conclusion

Extending the WHO's concern about the psychological impacts of COVID-19, this study was conducted as an initial effort to assess the psychological impacts of lockdown on the society of Pakistan. As of today, May 2, 2020, Pakistan is struggling with the control of disease as well as implementing partial lockdown. To investigate the psychological impacts, an online survey was conducted during the last week of March and the first week of April 2020 where respondents belonged to 45 distinct districts of Pakistan. By employing SEM-PLS techniques, we found that the lockdown has affected the mental state of people by giving them stress, mood swings, and fear as well. People with more educated fathers have less fear of job loss as they have some backup plan to fall. People have more trust and belief in governments. If people are satisfied with the measures taken by concerned institutions in this pandemic, then they have better mental state. The laziness due to lockdown is also contributing to mental state. Trust in governments can improve their mental state. Respondents with higher education have less fear of job loss. Satisfaction has a positive association with mental state. People having satisfaction in this pandemic will have better mental state. Satisfaction has been measured by belief in government as well. Better belief in the government will contribute towards better satisfaction and society will have better mental state.

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