

The Economic and Psychological Impact of COVID-19 Pandemic on Individuals: A Cross-sectional Analysis from Several Developing Countries

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ABSTRACT

OBJECTIVES

To address the socioeconomic and psychological impact of COVID-19 pandemic on individuals belonging to different developing countries.

METHODOLOGY

A cross-sectional study was conducted from March 2020 to June 2020 in different developing countries around the world. All consenting individuals who were 18 years or older, with access to the internet were included in the study. The individuals who did not speak English language, had no computer skills, and were younger than 18 years were excluded from the study. The survey started with recording socio-demographic information followed by administration of generalized anxiety disorder questionnaire (GAD-7). The severity of anxiety levels and degree of worrying were associated with sociodemographic characteristics and financial stability of participants. A p-value of <0.05 was considered as statistically significant.

RESULTS

A total of 552 individuals participated in the study with a mean age of 27.10(6.44) years. It was found that 94(17%) participants were given a temporary layoff while 26(4.7%) individuals were permanently terminated from their jobs amid the pandemic.

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Mexico had the highest rate of temporary suspension i.e. 30.8 percent. Moderate anxiety was found among one-half of the study population and the incidence of severe anxiety was 9.4%. Female gender was more susceptible to severe anxiety ($p = 0.001$). 4/5th of the individuals with severe anxiety did not have enough savings in their accounts to last more than a month ($p = 0.000$).

CONCLUSION

The current study indicates the restrictions in economic trade and movement of people has led to financial uncertainty and anxiety among the vulnerable groups. The authorities should provide regular relief funds to the daily wagers and underprivileged groups.

KEYWORDS

Anxiety; COVID-19; Coronavirus; Economy; Fear; Financial; GAD-7; Unemployment

INTRODUCTION

Flagged as the bubonic plague of the 21st century, the incidence of the COVID -19 (a disease caused by SARS-CoV-2) has gained popularity as a household name in the global community. This viral infection caused by the novel coronavirus first appeared in December 2019 in the city of Wuhan in China, in the province of Hubei [1,2]. Due to the effects of globalization, the interconnection between people and the absence of immunity in the world population against the new disease, and it's highly contagious nature, three months after its appearance, COVID-19 has spread rapidly in many regions of the world. On March 11th, 2020, the World Health Organization (WHO) identified it as a pandemic [1,3].

In a short time, COVID-19 has emerged not only as a global public health emergency but also as a global economic crisis, which no government or health system in the world was ready to face [4]. Today (June 27th, 2020), the world counts 9,947,624 coronavirus cases with 497,829 deaths (Worldometers, 2020).

This pandemic has had disastrous repercussions on multiple healthcare systems and the international market around the globe with an unprecedented ripple effect on the psychosocial and economic lives of people worldwide. At the declaration of the COVID-19 outbreak as a global emergency, many Governmental institutions have implemented very strict measures in an attempt to

decrease its rate of spread. Disciplinary measures regarding social distancing have been adopted by many countries to mitigate the course of the disease since it is highly contagious and that currently there is no vaccine to prevent COVID-19 or specific medication for its treatment [2,5].

As new measures are taken into account to reduce the spread of viruses such as social distancing, business and school closure, transport unavailability and strict isolation people are more likely to be prone to poor mental health conditions. There is an increased risk of anxiety among the population due to the fear of getting themselves or their beloved infected and its further consequences [6].

This pandemic has further weakened vulnerable economies. In many developing countries, there are daily wage workers who no longer have access to their living income due to unavailability of work [2,4]. All these circumstances have led to an increase in the unemployment rate and economic insecurity throughout the world [4].

Previous studies have shown that disruptive events such as illness or natural disasters are strongly related to harmful effects on mental health such as post-traumatic stress disorder (PTSD), depression, anxiety, among others [4,7].

Also, economic uncertainty has been shown to be a negative factor for overall mental well-being. Therefore, people with excessive economic problems, such as the majority of the population in these countries, could be considered vulnerable to psychological problems such as depression and substance abuse such as alcohol and suicidal tendencies [5,6].

In literature is easy to find many articles about COVID-19, most of them related to epidemiology, diagnosis, and treatment, we understand that it is one of the (priorities) criticisms, but recalling the real definition of the World Health Organization (WHO) Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity [8] and taking into account (considering) this definition, the number of articles related to mental and social well-being is less and in this article, we try to emphasize this last part to obtain a global view.

It is vital to consider the psychosocial and economic impact of the pandemic on populations at risk in order to provide possible durable solutions to the problem and empower those vulnerable populations with substantial economic plans and necessary psychological and social assistance. The current study addressed the socioeconomic and psychological impact of COVID-19 pandemic on individuals belonging to different developing countries.

METHODOLOGY

A cross-sectional study was conducted from March 2020 to June 2020 in different developing countries around the world. The non-probability convenience sampling technique was used to enroll participants in the study. All consenting individuals who were 18 years or older, with access to the internet were included in the study. The individuals who did not speak English language, had no computer skills, and were younger than 18 years were excluded from the study. The study was approved by the

ethical committee of the institutional review board of Jinnah Postgraduate Medical Centre, Karachi, Pakistan. After an electronic approval, participants were directed to a self-reported questionnaire.

Due to the inconvenience of a face-to-face interview during a pandemic, the authors adopted an online survey technique to conduct the data collection process. Social media was used to advertise the survey-based questionnaire among the local population of each country involved. The country was defined as a “developing country”, if it had an annual per capita income (Gross National Income [GNI]) between US\$ 875 and US\$ 10,725 [9]. The study questionnaire was inspired by previous recent studies aimed at similar objectives [10]. The survey started with recording socio-demographic information followed by administration of generalized anxiety disorder questionnaire (GAD-7) [11]. GAD-7 is a quick, easy-to-administer, and reliable tool to screen individuals for anxiety. The score for each individual is calculated by calculating the sum of numbers assigned to the response categories of 'not at all', 'several days', 'more than half the days', and 'nearly every day'. Scores of 5, 10, and 15 are taken as the cut-off points for mild, moderate and severe anxiety, respectively.

There were three types of questions asked i.e. likert scale, multiple checkbox and yes/no/not sure formats. No open ended questions were administered.

STATISTICAL ANALYSIS

The data was entered and analyzed using statistical package for social sciences (SPSS) version 25. There were two types of variables: Continuous variables and categorical variables. The categorical variables including the ordinal and nominal variables. Mean and standard deviation was used for continuous variables while frequency was used to present the data. The severity of anxiety levels and degree of worrying were associated

with sociodemographic characteristics and financial stability of participants. Moreover, the impact of severe anxiety was cross tabulated with practices and trust in government. Associations between independent and dependent variables were determined using chi square test. A p-value of <0.05 was considered as statistically significant.

RESULTS

A total of 552 individuals participated in the study, out of these the majority belonged to Nepal, followed by Ecuador and Pakistan. A minority of the participants belonged to Mexico, Ghana, Bolivia, Dominican Republic, and Russian Federation. The mean age of the participants was 27.10 + 6.44 years. The education status was high among the participants with the majority of the population being college graduates or higher. See table 1 for details.

Characteristics	N (%)
Country	
Bolivia	16 (2.9%)
Dominican Republic	13 (2.4%)
Ecuador	107 (19.4%)
Ghana	20 (3.6%)
Mexico	39 (7.1%)
Nepal	272 (49.3%)
Pakistan	70 (12.7%)
Russian Federation	15 (2.7%)
Mean Age	27.10 + 6.44
Gender	
Male	295 (53.4%)
Female	257 (46.6%)
Marital Status	
Unmarried	438 (79.3%)
Married	102 (18.5%)
Divorced/Separated	12 (2.2%)
Widowed	0 (0%)
Employment Status	
Hospital-worker	76 (13.8%)
Temporary suspension	94 (17%)
Working from home	129 (23.4%)
Job has been terminated permanently	26 (4.7%)
Retired or unemployed	14 (2.5%)
Socioeconomic or Financial Status of Participants during lockdown	
Do you have enough monetary savings in your account to last more than 4 weeks for yourself and your family?	
Yes	304 (55.0%)
No	248 (44.9%)
Dominican Republic	
Yes	6 (46.2%)
No	7 (53.8%)
Ecuador	
Yes	52 (48.6%)
No	55 (51.4%)
Ghana	
Yes	5 (25.0%)
No	15 (75.0%)
Mexico	
Yes	24 (61.5%)
No	15 (38.5%)
Nepal	
Yes	161 (59.2%)
No	111 (40.8%)
Pakistan	
Yes	40 (57.1%)
No	20 (42.9%)
Russia	
Yes	6 (40.0%)
No	9 (90.0%)
Bolivia	
Yes	10 (62.5%)
No	6 (37.5%)

Table 1: Socio demographic characteristics of study participants (n = 552).

Upon assessing the employment instability among the participants, it was found that about 94(17%) participants were given a temporary layoff while 26(4.7%)

individuals were permanently terminated from their jobs in the light of the current pandemic. Mexico had the highest rate of temporary suspension i.e. 30.8 percent. Meanwhile, other countries ranged between 10% to 25%. Nepal had the least number of individuals who lost their employment during the pandemic. Meanwhile, Ecuador faced the highest number of unemployment since COVID-19 was declared as a pandemic.

Upon asking the participants whether they had enough monetary savings in their accounts to last more than 4 weeks for themselves and their families, more than two-fifths of the population responded in negative (table 2).

Item	N (%)
How worried are you about catching coronavirus disease?	
Not at all	
A little worried	36 (6.5%)
Quite worried	94 (15.2%)
Very worried	194 (35.1%)
Extremely worried	145 (26.3%)
Mean score ± SD	3.30
How worried are you about someone in your family catching coronavirus disease?	
Not at all	
A little worried	27 (4.9%)
Quite worried	52 (9.4%)
Very worried	151 (27.4%)
Extremely worried	153 (27.7%)
Mean score	3.70
How worried are you about transmitting coronavirus to someone in your home?	
Not at all	
A little worried	78 (14.1%)
Quite worried	72 (13.0%)
Very worried	122 (22.1%)
Extremely worried	109 (19.7%)
Mean score	3.40
Total Mean score	
	3.47
Generalized Anxiety Disorder Scale	
Dominican Republic	
Score 5-9: Mild Anxiety	2 (15.2%)
Score 10-14: Moderate Anxiety	9 (69.2%)
Score >15: Severe Anxiety	2 (15.2%)
Ecuador	
Score 5-9: Mild Anxiety	37 (34.6%)
Score 10-14: Moderate Anxiety	56 (52.3%)
Score >15: Severe Anxiety	14 (13.1%)
Ghana	
Score 5-9: Mild Anxiety	11 (55.0%)
Score 10-14: Moderate Anxiety	6 (30.0%)
Score >15: Severe Anxiety	3 (15%)
Mexico	
Score 5-9: Mild Anxiety	7 (17.9%)
Score 10-14: Moderate Anxiety	29 (74.4%)
Score >15: Severe Anxiety	3 (7.7%)
Nepal	
Score 5-9: Mild Anxiety	126 (46.3%)
Score 10-14: Moderate Anxiety	129 (47.4%)
Score >15: Severe Anxiety	17 (6.2%)
Pakistan	
Score 5-9: Mild Anxiety	22 (31.4%)
Score 10-14: Moderate Anxiety	40 (57.1%)
Score >15: Severe Anxiety	8 (11.4%)
Russia	
Score 5-9: Mild Anxiety	10 (66.7%)
Score 10-14: Moderate Anxiety	3 (20.0%)
Score >15: Severe Anxiety	2 (13.3%)
Bolivia	
Score 5-9: Mild Anxiety	8 (50.0%)
Score 10-14: Moderate Anxiety	5 (31.2%)
Score >15: Severe Anxiety	3 (18.8%)
Over all scores	
Score 5-9: Mild Anxiety	223 (40.3%)
Score 10-14: Moderate Anxiety	277 (50.1%)
Score >15: Severe Anxiety	52 (9.4%)

Table 2: Incidence of worrying and anxiety among study participants during the pandemic.

The majority of the participants were either very or extremely worried about getting the virus as well as

about transmitting coronavirus to someone in their home. The mean score of worrying was 3.47. Moderate anxiety was found among one-half of the study population and the incidence of severe anxiety was 9.4%. It was found that Nepal had the lowest frequency of severe anxiety followed by Mexico, and Pakistan, with a frequency of 7.7%, 6.2%, and 11.4%, respectively (Table 3).

Characteristics	Mild Anxiety	Moderate Anxiety	Severe Anxiety	p-value
Gender				
Male	139 (62.3%)	136 (49.1%)	20 (38.5%)	<0.001
Female	84 (37.7%)	141 (50.9%)	32 (61.5%)	
Marital Status				
Unmarried	185 (83%)	211 (76.2%)	42 (80.8%)	0.331
Married	34 (15.2%)	60 (21.7%)	8 (15.4%)	
Divorced or widowed	4 (1.8%)	6 (2.20%)	2 (3.8%)	
Employment Status				
Hospital-worker	22 (17.6%)	46 (25.6%)	8 (28.6%)	<0.01
Job has been terminated	15 (12.0%)	11 (6.1%)	0 (0.0%)	
Temporary suspension	31 (24.8%)	59 (32.8%)	4 (14.3%)	
Unemployed	4 (3.2%)	2 (1.1%)	2 (7.1%)	
Working from home	53 (42.4%)	62 (34.4%)	14 (50.0%)	
Savings in account to last >4 weeks				
Yes	50 (40.0%)	63 (35.0%)	24 (85.7%)	<0.001
No	75 (60.0%)	117 (65.0%)	4 (14.3%)	

Table 3: Association of sociodemographic characteristics and anxiety among study participants (n = 552).

Female gender was more susceptible to severe anxiety compared to their male counterparts (p = 0.001). Interestingly, none of the individuals who lost their jobs to the pandemic scored severe anxiety levels. One-half of the individuals with severe anxiety were working from home at the time of data collection. The employment status was significantly associated with the anxiety levels among individuals (p = 0.01). 30 percent hospital workers suffered from severe anxiety. As expected, the majority i.e. four-fifth of the individuals with severe anxiety did not have enough savings in their accounts to last their families and them more than a month (p = 0.000) (Table 3).

However, the marital status, level of education of the individual and having children did not have any significant association with severe anxiety among the study participants.

DISCUSSION

The COVID-19 pandemic has affected all individuals irrespective of their age, gender, race, or socioeconomic status. Not only has the pandemic caused devastating

damage to the health-care systems all around the world, it also disrupted the economy of many countries and has completely wrecked many small developing countries. The aftermath effects of the COVID-19 pandemic would be unimaginable. The current study aimed to conduct a socioeconomic and psychological analysis to assess the impact of the pandemic in eight developing countries namely, Bolivia, Dominican Republic, Ecuador, Ghana, Nepal, Mexico, Pakistan, and the Russian Federation.

We assessed the employment instability among the participants and found that overall only a small fraction was given a temporary lay off from work while the rate of job termination was 4.7 percent. It was found that Mexico had the highest rate of temporary suspension i.e. 30.8 percent. Meanwhile, other countries ranged between 10 percent to 25 percent. Nepal had the least number of individuals who lost their employment during the pandemic. Meanwhile, Ecuador faced the highest number of unemployment since COVID-19 was declared as a pandemic.

It should be noted that the majority of the population in developing countries like Pakistan, Nepal, and Sri Lanka depend on the daily wages. Unfortunately, due to the lockdown and quarantine the daily wagers and urban dwellers are highly affected and face unemployment [12]. Furthermore, the young and inexperienced entrepreneurs, shopkeepers and owners of small factories and laborers who depend on income sources from daily trade and economic activities in the country have also suffered grave losses in their earnings [13]. In the United States, a decline in employment of sixty percent (19.8 million) was observed from February to April. However, as the lockdown was eased, the conditions started recovering [14]. In developing countries, the people are still faced with permanent unemployment and the recovery of economic activities may take a longer time than expected. These unprecedented times of global catastrophe is engendering stress, anxiety, and fear

throughout the population especially the vulnerable groups [15].

In a recent study from the United States by Wolf and colleagues, it was reported that out of a cohort of over six hundred individuals, almost one-fourth (24.6 percent) were very worried about contracting the COVID-19 disease [16]. This finding is in line with the current study, with about 233 individuals scoring high (a score of 4 or higher) on likert scale that assessed the severity of worry among the participants about getting infected with coronavirus. More than one-half of the study population claimed they were either “very worried” or “extremely worried” about transmitting coronavirus to their family members. Furthermore, we reported a high number of participants with moderate generalized anxiety disorder. The majority of the participants with moderate anxiety belonged to Mexico, followed by Dominican Republic, and Pakistan. It was found that those who were very worried about contracting the disease or transmitting COVID-19 to their family members also scored higher on the anxiety scale.

In a study from Uttar Pradesh, India, it was found that among the participants the anxiety levels were high with about 4 in every five individuals claimed to be indulged in thoughts of COVID-19. Furthermore, a high number of individuals also faced sleep disturbances (12.5%), fear of acquiring COVID-19 disease (37.8%) and subsequent distress (36.4%) [17].

One of the most important triggering factors of anxiety and fear among masses is the uncertainty associated with the pandemic [18]. It is crucial to acknowledge the

impact of unemployment and the associated uncertainty on the psychological well-being of an individual. In a recent unfortunate incident, a man committed suicide after being diagnosed with COVID-19 out of fear of infecting his family and disheartened by his sudden unemployment [19]. Burden of unemployment leading to increased poverty amid the rising COVID-19 prevalence, calls for a global humanitarian response to tackle these neglected economic issues.

The COVID-19 pandemic has seriously affected all domains of life, globally. The surge in COVID-19 cases and subsequent restrictions in economic trade and movement of people has led to unemployment increasing anxiety levels and other mental ailments among the vulnerable groups. Global enforcement of humanitarian response to the economic impact of COVID-19 must be implied to provide relief to the most devastatingly affected groups including the daily wagers and the urban slum dwellers.

It is also important that people engage in meditating exercises, relay their fears to their loved ones, and practice the updated guidelines as directed by the health authorities to prevent the spread of the COVID-19.

CONCLUSION

The current study indicates that COVID-19 pandemic has serious economic and psychological impacts on individuals belonging to developing countries. The restrictions in economic trade and movement of people has led to increased unemployment and anxiety among the vulnerable groups. The authorities should provide relief funds to the daily wagers and underprivileged groups.

References

1. Md Ahmed Z, Ahmed O, Aibao Z (2020) Epidemic of COVID-19 in China and associated psychological problems. *Asian Journal of Psychiatry* 51: 102092.

2. Jiao WY, Wang LN, Liu J, et al. (2020) Behavioral and emotional disorders in children during the COVID-19 epidemic. *The Journal of Pediatrics* 221: 264-266.
3. Fernandes N (2020) Economic effects of coronavirus outbreak (COVID-19) on the world economy. SSRN 3557504.
4. Sood S (2020) Psychological effects of the coronavirus disease-2019 pandemic. *Research & Humanities in Medical Education* 7: 23-26.
5. Godinic D, Obrenovic B, Khudaykulov A (2020) Effects of economic uncertainty on mental health in the COVID-19 pandemic context: Social identity disturbance, job uncertainty and psychological well-being model. *International Journal of Management Science and Business Administration* 6(1): 61-74.
6. Panchal N, Kamal R, Orgera K, et al. (2020) The implications of COVID-19 for mental health and substance use.
7. Fetzer T, Hensel L, Hermle J, et al. (2020) Coronavirus perceptions and economic anxiety. *Review of Economics and Statistics*: 1-36.
8. Nobile M (2014) The WHO definition of health: A critical reading. *Medical Law Review* 33: 33-40.
9. (2020) What is developing countries? IGI Global.
10. Varshney M, Parel JT, Raizada N, et al. (2020) Initial psychological impact of COVID-19 and its correlates in Indian community: An online (FEEL-COVID) survey. *Plos One* 15(5): e0233874.
11. Löwe B, Decker O, Müller S, et al. (2008) Validation and standardization of the generalized anxiety disorder screener (GAD-7) in the general population. *Medical Care* 1: 266-274.
12. Bashir S (2020) The impact of Covid-19: How Pakistani workers are living with the new reality.
13. (2020) Pakistan humanitarian response plan for COVID-19 pandemic 2020.
14. Kurmann A, Lale E, Ta L (2020) The impact of covid-19 on us employment and hours: Real-time estimates with homebase data.
15. World Health Organization (2020) Mental health and psychosocial considerations during the COVID-19 outbreak.
16. Wolf MS, Serper M, Opsasnick L, et al. (2020) Awareness, attitudes, and actions related to COVID-19 among adults with chronic conditions at the onset of the US outbreak: A cross-sectional survey. *Annals of Internal Medicine*.
17. Roy D, Tripathy S, Kar SK, et al. (2020) Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian Journal of Psychiatry*: 102083.
18. Cheung YT, Chau PH, Yip PS (2008) A revisit on older adults suicides and severe acute respiratory syndrome (SARS) epidemic in Hong Kong. *International Journal of Geriatric Psychiatry* 23(12): 1231-1238.
19. (2020) Fearing COVID-19 infection father of poor family commits suicide.