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## Open Access



## Socio-economic effects of COVID-19 – a study of the University students and teachers in Pakistan

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### Abstract

**Background:** Coronavirus Disease-2019 (COVID-19) has appeared as a deadly pandemic affecting most of the countries across the world. The disease has caught humanity unprepared; therefore, there has been a lack of awareness about the causes, and transmission and mortality rates. It has also affected the overall socioeconomics from individual to worldwide levels. COVID-19 is an unprecedented and first-time challenge for Pakistan and a lockdown imposed by the Government of Pakistan has further devastated the economy of the country. This online survey was conducted to know the effects of the Covid-19 pandemic on the social life and economic status of the people of Pakistan. In this article, we mainly focused on teachers and students from different Universities of Pakistan for data generation because they can provide better information due to the use of modern technologies as a source of information.

**Methods:** An online questionnaire survey covering 11 parameters including age, gender, employment status, mortality rate, education, marital status and, information about the pathogen responsible for the disease was filled by 1260 individuals from Pakistan.

**Results:** The results obtained show that 56.6% of the responders were males, 43.4% were females, 59.9% were unmarried, 37.7% were graduate students and, 48.7% unemployed. Most of the responders (55.6%) said that COVID-19 negatively affected the jobs of the people. We found (93%) of the responders with good knowledge about COVID-19.

**Conclusion:** We conclude from the results that most of the responders were males, educated and they knew the pathogenic effect of the COVID-19 virus on humans. These results also show that the disease has drastically affected the economy and social life of the people of Pakistan.



## Introduction

Currently, the novel Coronavirus Disease-2019 (COVID-19), formerly known as 2019-nCoV (the novel coronavirus), poses a significant threat to global health [1]. The World Health Organization (WHO) has declared this outbreak as a “public health emergency of international concern” on January 31, 2020. The disease is caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) and was first identified in Wuhan, Hubei Province of China that quickly spread worldwide [2–4]. Human to human transmission of the virus is proven to occur through respiratory droplets produced during coughing, sneezing and, close contact [1, 4–6]. As the disease progresses, a series of complications tend to develop, especially in critically ill patients [4]. Individuals’ rationality-oriented thinking manners may also be impaired due to the panic caused by the virus which in response may cause mental health afflictions along with economic and psychological problems [7–10]. The effects of the COVID-19 on physical health are mainly under focus globally but its impacts on psychological health cannot be neglected. Multiple studies have reported the impact of infectious disease outbreaks on public mental health, such as severe acute respiratory syndrome (SARS) in 2003 and the 2009 novel influenza A (H1N1) epidemic [11–14]. These types of epidemics led the public to experience psychological problems such as post-traumatic stress disorder, psychological distress, depression and anxiety [15]. Since the outbreak of COVID-19, a strict lockdown was imposed in Wuhan in January 2020 and other parts of the world, which has started global economic and humanitarian crises. To limit the spread of COVID-19 pandemic, WHO advised that those who display the symptoms of COVID-19 should keep themselves isolated from others for a period of 7–14 days, while those without symptoms should practice “social distancing” [16]. Many countries employed restriction and social distancing and self-isolation in travel, this slowed down the economic activities, particularly related to the global aviation industry, tourism, supply chain for consumer goods, services, construction and manufacturing sectors [17]. These scenarios were adopted to reduce the transmission of COVID-19, but they are also the direct channels to devastate the economies of both developed and underdeveloped countries with many small and medium-sized enterprises being interrupted and even bankrupted [18]. COVID-19 could affect the global economy in three main ways: by directly affecting production (supply), by creating supply chain and market disruption (supply), and by its financial impact on firms and markets (principally, demand) [19]. This implies that any

slowdown in a nation's economy could likely send waves across the global economy [20]. Fernandes [18] reported that during the present crisis most of the European countries faced an average estimated decline in their GDP from -3% to -4%, USA 1.7%, and the estimated GDP for China in the first quarter of 2020 was reduced to 6% while the level of global GDP is reduced by 1.75% during the COVID 19 measurements imposed. Pakistan is among the top 10 recipients of global remittances and received \$21.8 billion foreign remittances in 2019-20, which contribute to about 8 percent of its GDP [17, 21]. Currently, Pakistan has shrunk its 30 percent share in the Saudi labor market and this trend is maybe further increased after the COVID-19 pandemic, which may cause a significant decline in remittance flows in the future [21]. This potential decline in the remittance flows will further disturb the economy of the country at a large scale [17]. COVID-19 is an unprecedented challenge for Pakistan and the lockdown imposed by the Government of Pakistan has further devastated the economy of the country.

## Methods

### Design and Subjects

This cross-sectional study was conducted through the collection of data for the period from October 8, 2020, to January 15, 2021, by using an online questionnaire. Pakistani students and teachers aged 20–60 years were selected as participants of this online survey. Questionnaires consisted of two parts i.e., economic and social impacts of COVID-19 in Pakistan. Participants of the survey were 1400 in total. After the exclusion of incompletely filled questionnaires data of the participants, a total of 1260 participants were considered for the analysis in this study belonging to different provinces and autonomous regions of the country. These regions have been aimed to depict the conditions of Pakistan as a whole.

### The Assessment Tools and Procedures

A data collection sheet was designed to collect the necessary socio-economic and psychological data along with student/teacher understanding of COVID-19 (COVID-19 familiarity, measures for its prevention & control, and trends to forecast COVID-19), and specific questions of economic and psychological impact, were evaluated with the data collected through the online questionnaires. The participants had to choose suitable options from a self-generated questionnaire regarding the questions about their awareness of COVID-19. In the first question, the participants were questioned about their awareness level with the prevention & control of COVID – 19 related information while having options varying from 1 (very unfamiliar) to 10 (very

familiar). The second question asked the participants whether all the available COVID – 19 prevention & control measures to protect themselves from exposure of infection had been taken by them, the reaction variation was from 1 (very consistent) to 10 (very inconsistent). The third question requested the participants to give a response about their approaches concerning COVID – 19 trends forecasting which ranged from 1 (very pessimistic) to 10 (very optimistic).

## Results

A total of 1260 responses were received through online questionnaires within the study timeframe. The responses were divided into different categories in such a way that those responses which were not fit for our present research goals were removed from the analysis and the rest with the best information were further analyzed. The questionnaires were also segregated according to each parameter used for this study and different scores were obtained. A little more than half of the total 1260 responders were male (56.6%) (Fig. 1). Three age groups were made i.e., below 20 years, above 20 years, and 40 years. Most of the responders were in the age group above 20 years (74.1%) followed by those in the age group above 40 years (13.8%). Responders with age below 20 years were least in number (12%, Fig. 2). Out of 1,190 responses obtained in terms of marital status, most (59.9%) were unmarried while the married responders were found (40.1%) respectively (Fig.3).

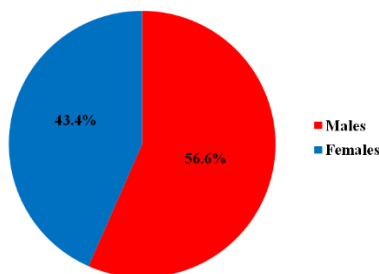


Figure 1: Gender wise distribution of respondents (Total of 1,198 responses).

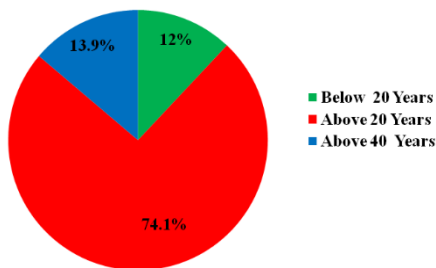


Figure 2: Age wise distribution of the participants (Total of 1,187 responses)

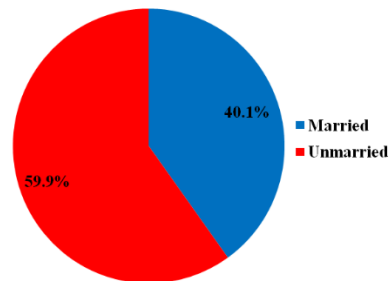


Figure 3: Marital status wise distribution of respondents (Total of 1,190 responses).

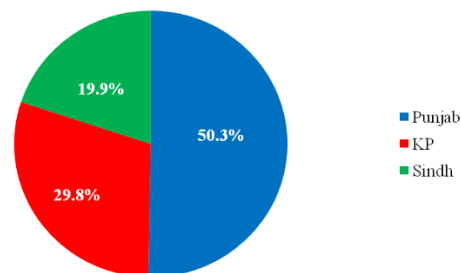


Figure 4: Ethnic and regional distribution of the participants (Total of 1,166 responses).

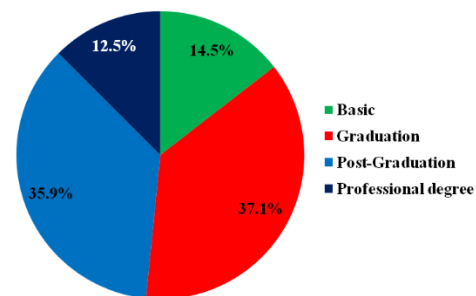


Figure 5: Education level wise percentages of respondents (Total of 1,196 responses).

Demographic information revealed that out of 1,260 responses, 1,166 were analyzed for the area of responder's residence among which 50.3% were from Punjab, 29.8% were from Khyber Pakhtunkhwa, while the rest of the responders (19.9%) were from Sindh (Fig.4). Among the 1,196 responders, those having graduate degrees were higher in number (37.1%) followed by post-graduate degree holders (35.9%) and those with basic education (14.5%). The professional degree holders were least in number (12.5%, Fig. 5). When the participants were analyzed for their job status, it was found that out of 1,183 responses, almost half (48.7%) were unemployed, followed by employed (43.1%), and those having their own business (7.1%). A very small numbers of these responders were of retired professionals (Fig.6). To the question "whether their jobs were affected by COVID-19 or not" a total of 1,173 participants responded. Out of these participants, the

majority of the responders (55.6%) said that COVID-19 negatively affected the jobs of the people, followed by those responders (29.5%) who believed that there was no effect of the pandemic on jobs. A minor fraction (14.9%), however, was unable to identify the effect of COVID-19 on jobs status (Fig.7).

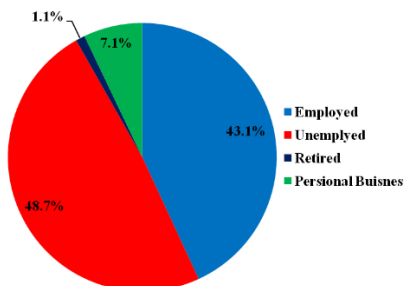


Figure 6: Percentages of respondents according to their occupation (Total of 1,183 responses).

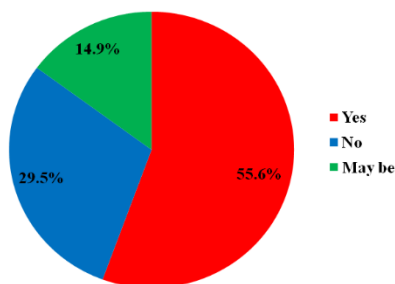


Figure 7: Effect of COVID-19 on jobs (Total of 1,173 responses).

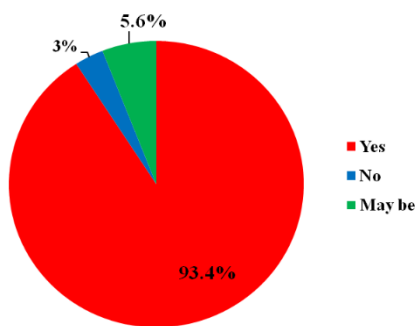


Figure 8: Responses against COVID-19 as a viral disease (Total of 1,195 responses).

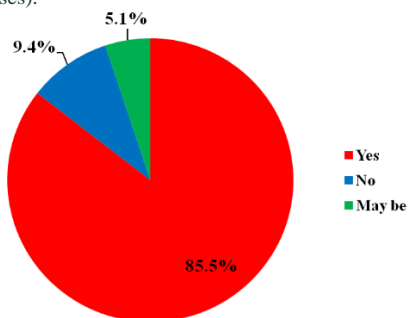


Figure 9: Prevalence of the COVID-19 among relatives or colleagues of the participants (Total of 1,198 responses).

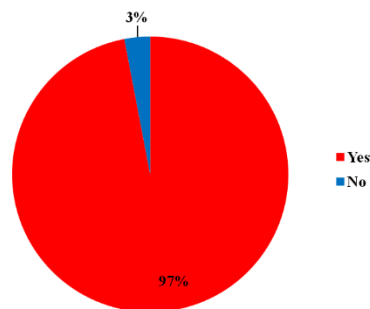


Figure 10: Deaths caused by the COVID-19 among relatives or colleagues of the participants (Total of 1,196 responses).

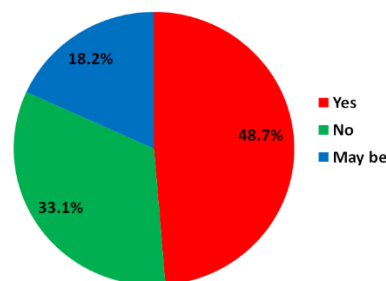


Figure 11: Effects of COVID-19 on job or business (Total of 1,198 responses).

The knowledge of the responders was tested regarding the pathogen responsible to cause the COVID-19 disease. A vast majority (93%) of 1,195 total responders was aware that COVID-19 was a viral disease, while the rest were either uncertain or did not know at all (Fig. 8). The volunteers were asked whether their relatives or colleagues have suffered from COVID-19, hence, a total of 1,198 responses were obtained among which the maximum numbers of volunteers (85.5%) answered that none of their relatives or colleagues have been affected by the virus, however, some (9.4%) responded “yes”; the rest were unsure about it (Fig. 9). Most participants (97%) out of 1,196 reported that no deaths occurred among their relatives or colleagues due to COVID-19 and the remaining (3%) reported death due to COVID-19 among their relatives and colleagues (Fig. 10). To the question if their jobs or businesses were affected by COVID-19, a total of 1198 participants responded. Among those, almost half (48.7%) complained that COVID-19 was the main cause of losing their jobs or damage to their business (Fig. 11).

### Discussion

The Covid-19 pandemic has affected all socio-economic aspects of life. The United Nation’s Framework for the Immediate Socio-Economic response to the COVID-19 crisis has warned that “The COVID-19 pandemic is far more than a health crisis: its effects on societies and economies can be seen at their core. While the negative socio-economic impact of the pandemic may be

different on different countries, it surely has increased poverty and disparities globally, making it even more urgent to achieve the 17 Sustainable Development Goals (SDGs) [22]. Poor people are more likely to get infected and die from the COVID-19 pandemic [23]. In the United States and Spain, low income individuals are overly affected probably because the poor families mostly live in packed houses and work in the crowded places as supermarkets [24, 25]. Moreover, because of being uninsured or underinsured, a majority of low-income individuals may not get proper access to health care facilities [26]. As most employers provide health insurance, loss of job has resulted in loss of health insurance for millions of US citizens [27, 28]. The present study was conducted to find out the effect of COVID-19 pandemic on the economic and social life of the people of Pakistan. The online survey shows that the majority of the responders were males as compared to female which shows that males are socially very active as compared to females and are therefore active in response. The higher ratio of male responders was also found in Bangladeshi and Chinese populations [6, 29]. We also found that mostly the responders were from 20 to 40 years old which reflects that the availability of internet and its use is very common among this age group [30–32]. In the present study, unmarried responders were more in number as compared to married and have been found consistent with other studies [29, 33]. The responses obtained from graduates for COVID-19 were high with the frequency of 37% followed by post graduates 35.9%. This highest frequency of graduate was nearly equal to as previously reported in the United States, Russia and Belarus [34, 35]. We also reported that most of the participants (48.7%) were unemployed at the time of this study and were therefore active to respond on time as compared to employed and retired professionals. Furthermore, 55.6% of the present study responders identified that COVID-19 is the major cause of their unemployment and damaged their businesses. This rise in unemployment relation with COVID-19 and its negative impact on businesses is also reported by other studies [36–39]. This raise in unemployment ratio is due to social distancing implemented by the governments or the people restricted themselves to their homes due to the panic of COVID-19 spreading [40]. The current study revealed that most of the responders (93%) identified that COVID-19 is a viral disease which represents that their knowledge about this pandemic is good. Similar results were also reported recently from Pakistan [41, 42]. Here we noted that most of the responders of the present study are educated, hence, their response in terms of knowledge about COVID-19 is said to be excellent. The

results obtained from the present study revealed that the mortality rate due to COVID-19 is very low because 97% of the responders show that no one had died among their relatives from the disease. Only 3% responders of the present study said that COVID-19 caused death. This low mortality rate has also reported recently from China [43, 44]. Knowing the low mortality rate of COVID-19 will also be of great importance to lower the socio-economic impact of the disease in the near future.

## Acknowledgment

Authors acknowledge the responders and all the contributors of this survey.

## Conflict of Interest

Authors declared no conflict of interest.

## Author Contributions

IU, BNM, MM, conceived the research idea and prepared a research plan, SD, ADK, RM, evaluated the results and prepared the initial draft, IU, MQ, MFK, AM, prepared the final draft of manuscript and made final corrections.

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