



## Original Article

## Impact of COVID-19 on Employment in Tertiary Care Hospital of Karachi

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## ABSTRACT

A public health dispute regarding the pandemic disease COVID-19 has wrapped up the entire world. Based on statistics Pakistan lies as a low and middle-income country throughout the world and out of 189 countries it lies in the 152nd rank with an index value of 0.560 on the Health development scale. **Objective:** To evaluate the unemployment among health care workers working in rehabilitation departments in tertiary care hospitals. **Methods:** This was a cross-sectional survey of sample size 212 conducted on healthcare workers working in Ziauddin hospital department of rehabilitation sciences, Karachi, the research study is explanatory, whereas the method is quantitative. The initial research was done by gathering the literature linked to healthcare workers and being examined via validated questionnaires through emails and various statistical tools used to analyze the complete data. **Results:** The results showed that the mean age was found to be  $28.75 \pm 5.8$ . Male participants were found to be 20(9.4%) and females were 192(90.6%). Most of the participants were graduates 128(60.4%) followed by post-graduate 76(35.8%). There were 128(60.4%) participants who were single. Employment status was asked most of the respondents found out of work and looking for work there were 16 respondents in Taking care of the home and family and 80 unemployed and seeking a job with a significant P-value of <0.001. **Conclusion:** The conclusion of the study showed there is a significant effect of the COVID-19 pandemic disease on the employment status of workers of healthcare in tertiary care hospitals in Karachi.

## INTRODUCTION

The significant impact on the health and economic status of Pakistan occur due to the outbreak of the pandemic disease in recent decades named COVID-19. Over 113 million cases have been reported globally among which the United States reported the highest number of cases that are up to a 28 million and the highest number of deaths as well. Apart from that, India, Brazil, Russia, and United Kingdom are among the countries where the effects of this virus have taken a toll on. Pakistan is the 30th most affected country, according to the World Health Organization (WHO). Before spreading the disease throughout the World the city named Wuhan, China has reported the first case of COVID-19 in December 2019. It was quickly identified as a novel beta-corona virus by March 2020, COVID-19 was pronounced as a

pandemic by the WHO [1]. COVID-19 occurrence is due to the cause of SARS CoV-2 (Severe Acute Respiratory Syndrome). For correct management of COVID patients, accuracy is required in diagnosis so for this purpose CT (Chest Computer Tomography) can play a vital role in the diagnosis of a patient because there is no proven scientific treatment available up till now for this virus. Chest CT scan can reveal abnormal clinical features such as pneumonia, ARDS, anemia, and cardiac injury, which can cause death as well. A major noticeable symptom in the subpleural area of both lungs is the finding of multiple peripheral ground-glass opacities which can lead to an increase in the inflammatory responses of the immune system. The route of transmission of COVID-19 is through direct contact and

droplets. It severely affects the respiratory system in older adults and those with chronic obstructive pulmonary disease and other respiratory conditions, cardiac diseases, kidney diseases, overweight, and diabetes are at a higher risk to develop severe coronavirus with more serious complications, requiring hospitalization. Recently there is a variation in the casualty rate of the affected population on an average of 2.3% of elderly people more than 80 years are at high risk as compared to the initial estimation that was based on severely ill patients' susceptibility [2, 3]. During the period of incubation both symptomatic and asymptomatic carriers can transmit the disease because it is assumed to be the highest infectious and communicable disease [4]. Due to the deficit of healthcare facilities and instability of the financial status of the Eastern Region recently WHO has been frightened and reported an increase in COVID-19 cases. As the foundation of health structure in Pakistan is weak so recently the country formulates policies and implemented strategies to reinforce surveillance, as thermal screenings should be mandatory at all entries and data collection, which have been done through a contact tracing mechanism [5]. From the 1st wave of coronavirus in which the country's economic rate was affected taking the lesson from the three months lockdown that was inflicted, there a decision was taken by the government to impose a smart lockdown instead of a complete lockdown because of the rise in COVID-19 cases. In the least developed and developing countries, the social and financial loss of COVID-19 has been seen at a great margin. There is a fall in GDP and income concerning employment and which results in a rise in the level of poverty, malnutrition, and lack of resources, etc. Health care facilities and hospital employees have also suffered during this time. The pandemic-induced insecurity is now pushing these health care employees to the edge due to the prevailing uncertainty in employment in Pakistan [6]. There is a multiple-level impact of COVID-19 in tertiary care hospitals. At the health department level, OPD (Out-Patient Departments) were closed, and an increase in emergency or COVID-19 cases occur which causes a decrease in the revenue of the hospital. The shortage of important medications occurs due to the increase in demand and decrease in the supply of medications [7]. The diversion of help from Healthcare Providers occur because they are also at a high risk of acquiring the pandemic disease as they are more exposed to the virus as compared to others. A country like Pakistan has a limited number of resources and professionals seeing to the lack of capacity to serve patients in non-emergency conditions [8]. Due to the postponement of elective or planned work the financial loss occurs more than 55% and also there is a decrease in musculoskeletal trauma elective procedures. There is also

a reduction in return on investment of inpatient care during the pandemic period. Inpatient hospital stay was also minimized during the COVID-19 period. Personal protective equipment procurement cost was an additional expense during the pandemic condition by the management of the hospital [9]. Where there had been a massive influx of COVID-19 patients in the isolations wards so much so that there has been no room to facilitate more, there we see on the other hand the shortage of medical staff and appropriate gear required to have on when coming in contact with these patients. These health care professionals have been working extra hours during this time of crisis. A huge number of hospital employees contacted the virus and the hospital has no substitutes on their behalf [10]. A large number of lower-level employees were laid off as well because hospitals were not able to afford them. There hasn't been any new induction of health care staff, which ultimately led to a decline in the employment rate. The implication of mental health characteristics is also an important thing for consideration [11]. In Pakistan occurrence of coronavirus was in February 2020 and the first national lockdown due to pandemic disease was started in March 2020, currently, 0.4 million cases have been recorded, semi-lockdown throughout the nation due to 2nd wave was started in November 2020, In highly populated country Pakistan, The scarcity of doctors and other health resources occur during the COVID-19 period [12]. Rise in COVID-19 positive cases are also due to the geographical area of Pakistan, and there is a requirement of high consideration, strategic planning, and action with evaluation. National Action Plan for Preparedness and Response to Corona Virus Disease plan is offered by the Ministry of National Health Services, Regulation and Coordination of Pakistan on 12th February. During COVID-19 period new inventions of Hospitals, Corona wards in hospitals, quarantine centers for COVID-19 patients, facilities for disease testing, preventive measures, and community awareness programs organized by the government are underscored in this study [13]. The study was conducted to evaluate the market rate of unemployment among health care workers working in rehabilitation departments in tertiary care hospitals during the pandemic and what measures need to be taken by the relevant authorities to remedy them.

## METHODS

This cross-sectional study was explanatory, whereas method was quantitative, in which nonprobability convenience sampling is used while the survey research is carried out by the health care providers working in Ziauddin hospital Karachi. The sample size of the research is 212 Health care workers working in the rehabilitation

department (Physiotherapists, Physio Aide Occupational Therapists, Occupational Aide, and Speech Therapists with assistance). Both females and males work in Ziauddin Hospital in Karachi, aged between 20 to 65 years. All married and single respondents were included. The initial research is started by gathering the literature linked to healthcare workers and is examined via a survey questionnaire various statistical tools was used to analyze the complete data. Data were collected from both primary and secondary sources, the questionnaire is used as a primary source of data collection, whereas the secondary data source of the research or articles, journals, and citation of related articles. A validated questionnaire designed by the International Labor Organization was used, to perform multiple analyses. The questionnaire was distributed through email to the list of 350 clinical Healthcare Worconsistede hospitals. An initial email was sent on 2 May with a reminder on 5 May. Responses were recorded from 2 May to 8 May 2021, The final survey questionnaire consisted of 14 questions with two sections (demographic information and employment status). There are two types of analysis used in this study, descriptive, in which demographic information is used in tabular form and inferential, in which statistical tools are used to understand the impact of COVID-19 on employment i.e. Recruitment and selection, pay system, job reliability, degree of satisfaction, etc. SPSS version 23.0 was used to analyze the quantitative data.

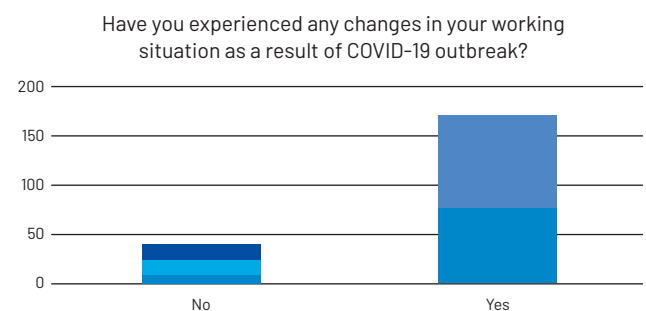
## RESULTS

A total of 212 participants were included in this study. The mean age was found to be  $28.75 \pm 5.8$ . Male participants were found to be 20(9.4%) and females were 192(90.6%). Most of the participants were graduates 128(60.4%) followed by post-graduate 76(35.8%). There were 128(60.4%) participants who were single. Employment status was asked by most of the participants 96(45.3%) found out of work and looking for work. Employed for wages were 84(39.6%). 76 participants experienced any changes in their working situation as a result of the COVID-19 outbreak and were employed of wages. and out of work looking for work was 96 participants. When asked about what is the main reason why you had to stop or close your account activity or family business. 20 employed for wages and 32 out of work and looking for work replied government ordered closure. Insecurity and fear of illness were found in 12 employed for wages and 32 out of work and looking for work category with a significant P-value of  $<0.001$ . When asked about what is the main reason you had to stop working or lost your paid job there were 24 employed of wages replied that order was you had to quit yourself similarly 24 replied seasonal, temporary or casual job end

and 30 replied that told to wait until called back with significant P-value of  $<0.001$ . When asked about, "Do you expect to return to the same job once the situation was over?". There was 36 employee for wages who already returned to their job whereas 16 were unsure about their job with a significant P-value of  $<0.001$ . When asked about as a result of the COVID-19 outbreak, "Did you earn about the same income as usual 36 employed for wages?", reply was "yes", whereas 16 participants out of work and looking for work replied, "yes" with a significant P-value of  $<0.001$  When asked about, "What measures did you take to compensate for the loss of income you faced?", there were 32 respondents employed for wages and 32 from out of work and looking for work who replied that, "they sold their assets", with a significant P-value of  $<0.001$  When asking about which of the following describes as what you are mainly doing at present? Most of the respondents found out of work and looking for work there were 16 respondents Taking care of the home and family and 80 were unemployed and seeking jobs with a significant P-value of  $<0.001$  as shown in Figure 1.

| Mean Age                         | 28.75 ± 5.8          |
|----------------------------------|----------------------|
| Gender                           |                      |
|                                  | Frequency; n=212 (%) |
| Female                           | 192 (90.6%)          |
| Male                             | 20 (9.4%)            |
| Education                        |                      |
| Graduate                         | 128 (60.4%)          |
| Ph.D. or equivalent              | 8 (3.8%)             |
| Postgraduate                     | 76 (35.8%)           |
| Marital Status                   |                      |
| Married                          | 84 (39.6%)           |
| Single                           | 128 (60.4%)          |
| Employment Status                |                      |
| Employed for wages               | 84 (39.6%)           |
| Out of work and looking for work | 96 (45.3%)           |
| Self-employed                    | 16 (7.5%)            |
| Unemployed and not seeking a job | 16 (7.5%)            |

**Table 1:** Frequency and Percentage of participants of the study.



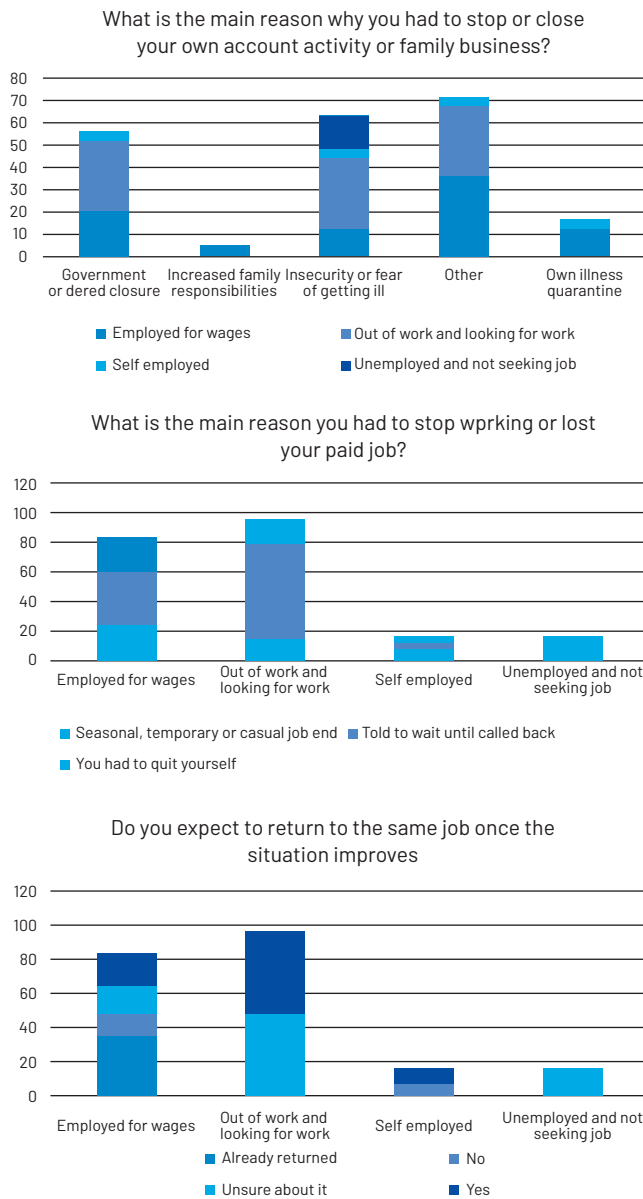


Figure 1: Graphical illustration of participant data.

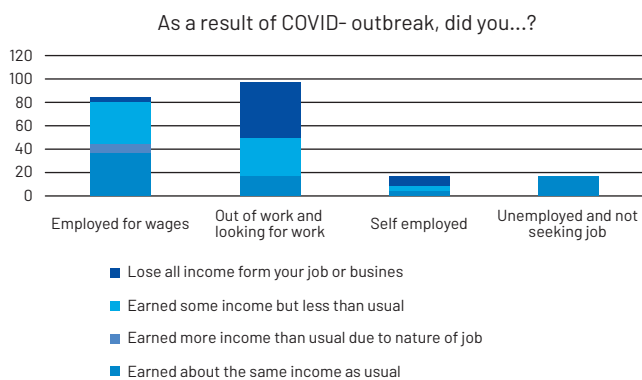


Figure 2: Participant response on various queries asked.

## DISCUSSION

Throughout the world, COVID-19 is proved to be the highest stake in the healthcare system. To control the further transmission of pandemic disease WHO gave SPRP (Strategic Preparedness and Response Plan) in the beginning. For caring and treatment of patients healthcare workers of all professions are available in every country [14]. Due to consistent contact of healthcare workers with infected patients, their occupational health is also at risk. In one of the studies, it is documented that delayed or misdiagnosis, poor control practice of this communicable disease due to lack of knowledge among healthcare workers. There should be in priority to prevent communicable diseases in hospitals because several healthcare workers have already been infected [15]. According to A. Waris, Atta Asmat, A. Baset in 2020, the present situation of our country is unsatisfactory as Pakistan is an overpopulated country requiring medical facilitation. And so, our economic position is not good in comparison to other countries like China, the USA, the UK, and Russia to battle with the occurrence of COVID-19 [13]. Medical facilities and supplies in tertiary care hospital is depleting. If these facilities are adequate, it shall not be an issue to control the pandemic. Similarly, in a recent study conducted in 2020 by Muhammad Atif and Irum Malik, we see that although with a low death rate, the spread of COVID-19 among the people is swift, keeping in mind the vulnerable health care system and the lack of ample

supplies that we are facing due to which we see an increase in the number of cases thus leading to increased morbidity and mortality. This situation can be well controlled by staying at home, social distancing, and the use of precautionary measures like masks and sanitizers. Violation of SOPs can lead to an increase in the number of cases. Furthermore, in a study conducted by Atiqa Khalid and Sana Ali in 2020, we have seen that medical staff should be given appropriate training and protective gear by the government. Atiqa Khalid and Sana Ali highlighted the Challenges faced by HCWs due to the pandemic in 2020 where they implied that initially, Pakistan lacked standard operating facilities which have now been overcome to quite some extent due to which there has been a difference seen in the current scenario and hence the best way to overcome it is by providing healthcare facilities and employment opportunities to the healthcare staff in these times [16]. In our study it is proved that there is a negative effect of COVID-19 on employment of healthcare professionals due to the lockdown situation most HCW lose their jobs due to financial loss and low productivity of institution, and they have to take leave from a paid job due to government order of lockdown and quarantine due to COVID-19 illness and most of the organizations follow downsizing strategy to reduce the capital of an organization and increase the return on investment [17, 18]. As the previous study showed Spain, the UK, and Italy are highly affected by this pandemic disease that causes a worse effect on their health and employment status because of the closure of their organizations a huge level of the financial crisis is seen in these countries because of unemployment, loss of jobs. According to one of the study, COVID-19 not only cause effects on the labor market but also cause the transformation of services into telework that can reduce the contagion effect of pandemic disease and preservation of health and finance as well [19]. According to the current situation most affected province of Pakistan is Sindh in which 427,037 cases confirmed reported at present and still, a lockdown is continued by the government to control the health status of the province [20]. To overcome the economic status of Pakistan formation of a new economic structure is required that can cause a rise in operating margin and demand within the country which unfortunately fall due to the COVID-19 virus from the previous year. Now the vision of Pakistan in the long term is to control the severe effects of this pandemic disease on health and economic status and this can be overcome by applying some alternative strategies through health regulation and authorities of Pakistan.

## CONCLUSIONS

According to the results of our study, it is shown that due to

pandemic disease employment status of healthcare workers in the hospital is seriously affected and needs improvement to overcome the current situation with good strategic management by the competent authorities.

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