

Effects on Mental Health of Health Care Workers Due to Covid-19

Qazi Danish Ayub
Department of Computer Science
Information Technology University
Lahore, Pakistan
msds20075@itu.edu.pk

Muhammad Mubashir Ali
Department of Computer Science
Information Technology University
Lahore, Pakistan
msds20085@itu.edu.pk

Abdullah Aziz
Department of Computer Science
Information Technology University
Lahore, Pakistan
msds20052@itu.edu.pk

Abstract—Covid19 a pandemic which have affected 54 million people and 1.4 million deaths around the globe and with the second wave is being the deadliest pandemic of the century during this pandemic health care worker due to lack of resources have been traumatized and were in continuous mental health issues according to the survey conducted in the 3 cities of Pakistan.

Keywords—SARS1, SARS2, Covid19, DASS21, pandemic.

I. INTRODUCTION

A pandemic has always been a very deadly event in the history of mankind. They are predicted to come after every 100 years. The outbreak first started in Wuhan City, China in December 2019. Then it spread all over the world. World Health Organization (WHO) announced the occurrence of novel coronavirus in January 2020 and later on declared it a Public Health Emergency of International Concern (PHEIC). Confirmed cases of Covid 19 in Pakistan has increased up to 460,672 on 22 December 2020 with 9,474 deaths.

Around the globe doctors are the ones that are highly affected by the outbreak of the virus and so is the case in Pakistan. The current situation with doctors tells entirely a different story. The workers are not provided with proper equipment to protect themselves. The fear of unknown and huge number of deaths happening everyday while the vaccine is quite likely to reach after a long time. Along with their work medical workers also must deal with their families. Knowing that contacting other people can make them vulnerable to the virus is another constant fear that adds on to the other worries of these medical workers. These factors are bound to disturb the mental health of doctors and paramedics.

Looking into the research conducted in Pakistan Services hospital of Lahore is the only place where the data regarding to the mental health of the paramedics have been collected during the pandemic and so this papers converts the research conducted on four multiples cities Lahore, Islamabad, Karachi and Multan. Looking to the situation this study also covers the mental health situation of the Medical staff in the second wave of the virus and so is very important to evaluates and come up with possible solution for them regarding to their mental health and to keep them in their normal condition. This research also does a comparison of the difference between their previous situation of the information gather from a single city and going through the

press release by the state with current data collected from four major cities of Pakistan.

II. LITERATURE REVIEW

The Covid 19 pandemic has caused a lot of distress among people in many areas of life. The research conducted during the SARS outbreak more than 10 years ago suggested that the health care workers were suffering from depression anxiety and stress [1]. The same is being anticipated currently for the coronavirus pandemic. For previous studies conducted between Jan 2020 to Aug 2020 it is quite clear that the method to collect data has mostly been through surveying frontline healthcare workers during this pandemic. These were done physically, with participation rate 68.7% [2] or through online survey forms [3]. The main objective of these studies is to find the relationships between Covid 19 and psychological related variables.

The questionnaires that were observed during this literature review consist of 2 sections one part takes input of the personal information such as age, gender, role, marital status, experience, education, and the other part is mostly based on professionally developed self-assessment questionnaires. Such as the Insomnia Severity Index (ISI) or the Depression, Anxiety, and Stress Scale (DASS)-21 for example [4]. The DASS Scale 21 consist of three sub items to calculate Anxiety, Stress and Depression. To calculate each section, consist of 7 question. The rating of DASS sub items such as depression, anxiety, and stress can be rated as normal, mild, moderate, and extremely severe. Each item is scored in a self-rated Likert scale from 0 to 3. The DASS scale has shorter version and longer version (comprising of 21 and 42 items, respectively). In DASS-21, the final score of each item is multiplied by two to obtain the final score [5].

The average age of the participants ranged between 26-40 years. Most of the participants were females [6]. suggests that different age groups show worry for different reasons. For example, age group (31-40) years was always worried if they might infect their families. Age group > 50 years felt stress after a patient they were looking after died [7].

A study Conducted in India and found that the healthcare workers were suffering from worries related to personal matters like being a source of infection for family and other health workers [7]. Possibility of being quarantined. Anxiety of household problems related to lockdown [8]. also found that health care workers were worrying because they had to contact different confirmed cases.

Another study found out that the frontline workers had trouble sleeping (insomnia) at night which made their worries worse [9]. It is essential to consider timely therapeutic treatment for stress management with healthcare workers [10].

III. DATA COLLECTION

This was a cross sectional web-based survey conducted between December 1 and December 18, 2020, using an online questionnaire spread via social media platforms. Some responses were collected manually by visiting public hospitals. The questionnaire survey was also translated into Urdu for participants that were not English literate. This was conducted at a time when second wave of this pandemic was at its peak. To compare the inter-regional differences of mental health outcomes among health care workers in Pakistan. The major cities considered for this study were Islamabad/Rawalpindi, Multan, Karachi, and Lahore. A total of 132 responses were collected. The web-based questionnaire was very simple to fill. The link of the survey was shared with social media groups (Facebook, WhatsApp groups) consisting of doctors. The participants were informed about the survey and the intention behind this study. They were also provided with a website link for DASS research, based on which a major portion of this survey was designed. It was a simple google form. Upon clicking the link participants were directed to the form, where they could choose the options for each question. The survey * consists of two sections. The first section gathers the demographic information about the individual participant for example, gender, age category, marital status, education level, designation etc.

The second section is based on the DASS21 questionnaire, which is a shorter version of DASS, the Depression Anxiety Stress Scales. It is made up of 21 questions which are divided into 3 categories i.e., depression, anxiety, and stress. The 3 fundamental indicators of a disturbed mental health. The objective of this assessment is to isolate and identify the aspects of emotional disturbance. Each question is scaled from 0 to 3. Following instructions were provided to every participant to choose their option.

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all

1 Applied to me to some degree, or some of the time

2 Applied to me to a considerable degree or a good part of time.

3 Applied to me very much or most of the time

Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items.

Level	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18

Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extreme Severe	28	20	34

IV. REFERENCES

- [1] K. K. Wu, S. K. Chan, and T. M. Ma, "Posttraumatic stress after SARS," *Emerg. Infect. Dis.*, vol. 11, no. 8, pp. 1297–1300, 2005.
- [2] J. Lai *et al.*, "Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019," *JAMA Netw. open*, vol. 3, no. 3, p. e203976, Mar. 2020.
- [3] R. Rossi *et al.*, "Mental Health Outcomes Among Frontline and Second-Line Health Care Workers During the Coronavirus Disease 2019 (COVID-19) Pandemic in Italy," *JAMA Netw. Open*, vol. 3, no. 5, pp. e2010185–e2010185, May 2020.
- [4] S. S. Chatterjee, R. Bhattacharyya, S. Bhattacharyya, S. Gupta, S. Das, and B. B. Banerjee, "Attitude, practice, behavior, and mental health impact of COVID-19 on doctors," *Indian J. Psychiatry*, vol. 62, no. 3, pp. 257–265, May 2020.
- [5] F. Shahzad *et al.*, "Perceived Threat of COVID-19 Contagion and Frontline Paramedics' Agonistic Behaviour: Employing a Stressor–Strain–Outcome Perspective," *Int. J. Environ. Res. Public Health*, vol. 17, no. 14, p. 5102, Jul. 2020.
- [6] H. Cai *et al.*, "Psychological impact and coping strategies of frontline medical staff in Hunan between January and March 2020 during the outbreak of coronavirus disease 2019 (COVID) in Hubei, China," *Med. Sci. Monit.*, vol. 26, pp. e924171-1, Apr. 2020.
- [7] R. Mohindra, R. R. V. Suri, A. Bhalla, and S. M. Singh, "Issues relevant to mental health promotion in frontline health care providers managing quarantined/isolated COVID19 patients," *Asian J. Psychiatr.*, vol. 51, p. 102084, 2020.
- [8] L. Kang *et al.*, "The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus," *The Lancet Psychiatry*, vol. 7, no. 3. Elsevier Ltd, p. e14, 01-Mar-2020.
- [9] "(PDF) Effect of covid 19 on health care workers." [Online]. Available: https://www.researchgate.net/publication/343222483_Effect_of_covid_19_on_health_care_workers. [Accessed: 14-Nov-2020].
- [10] Y. T. Xiang *et al.*, "Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed," *The Lancet Psychiatry*, vol. 7, no. 3. Elsevier Ltd, pp. 228–229, 01-Mar-2020.