



## **Quality of Life of Health Care Professionals during COVID-19 Pandemic in Kolkata**

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**Abstract:** The state of the health care workers in COVID-19 has gotten worse due to the nature of the diseases, poor working conditions, long hours, stigma, and prejudice in the community. This study is being performed to learn more about the quality of life and its main factors among health care workers (HCWs) in a low-middle income nation like India during the COVID-19 epidemic. At two COVID-specific centers in New Delhi, a cross-sectional study utilizing an online questionnaire survey built on a Google form was planned. The factors of work environment, discipline, age, sex, and type of job had no discernible impact on the quality-of-life areas. The pandemic mainly had an impact on the mental, social, and general vitality aspects of HCWs' overall well-being. Most respondents cited social isolation as a primary worry.

**Keywords:** COVID-19, health care professional, mental health, quality of life

### **1. Introduction:**

Globally, the COVID-19 pandemic has had an influence on people's life. Health care workers were forced to make tough decisions and operate under intense pressure as a result of the epidemic, which was unprecedented. These choices included allocating limited resources to equally deserving patients, balancing their own needs for physical and mental health care with those of patients, balancing their desire and obligation to care for patients with those of family and friends, and providing care for all critically ill patients with limited



or insufficient resources. Concerns about the low standard of living of healthcare professionals (HCWs) have been present during previous pandemics. With the current COVID-19 pandemic lasting from 2020 to 2021, health systems have also reached their breaking point, and the concern for HCWs' quality of life has become a top issue. When a pandemic is present, good resource management and management of the medical personnel are essential. The SARS novel Coronavirus-2 (SARS nCoV-2) virus, which primarily spreads through aerosols of saliva/sputum while coughing or fluid produced from the nose while sneezing, is the infectious disease known as COVID-19. The virus may spread by feces or via mouth-to-mouth contact, but this is still up for debate. Infection spreads quickly due to the highly contagious respiratory route of transmission. Health professionals' quality of life is significantly impacted by occupational health risks, dangerous working conditions, inadequate training in infection control, and a lack of protective equipment, mistrust of the public, and all these factors taken together. WHO defines quality of life as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns? It is a broad-ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships, and relationship to salient features of their environment. This survey is conducted to understand the quality of life and its key determinants among HCWs during the COVID-19 pandemic in a low middle-income country like India. It will be essential to understand the overall well-being of health workers and suggest policy measures that can address the same. Rashid et al. (2022) indicate the issues which should be addressed to improve the quality of life of frontline workers who fight against the pandemic. This cross-sectional, telephonic interview-based study was conducted among 322 randomly selected HCWs from Bangladesh who were positive for COVID-19 and recovered from the infection before the interview. Data were collected from June to November 2020. Kaur et al. (2022) Nature of disease, poor working conditions, prolonged work duration, stigma, and discrimination in the community have worsened the well-being of health care professionals in COVID-19. The overall well-being of HCWs was



affected during the pandemic mostly across mental, social, and general vitality domains. Social isolation was a key concern reported by the majority of HCWs. Stojanov et al. (2021) The aim was to evaluate the quality of sleep (QoS) and health-related quality of life (HRQoL), among health care professionals treating patients with COVID-19, as well as quantifying the magnitude of symptoms of depression and levels of anxiety. Young et al. (2021) the authors sought to quantify the rates of psychological distress among health care workers (HCWs) during the COVID-19 pandemic and to identify job-related and personal risk and protective factors. Nearly half of the HCWs reported serious psychiatric symptoms, including suicidal ideation, during the COVID-19 pandemic. Perceived workplace culture and supports contributed to symptom severity, as did personal factors. Yactayo-Albuquerque MT (2021) To examine the impact of oral disorders on oral health-related quality of life in Latin America and the Caribbean (LAC), we conducted a systematic evaluation of research undertaken in the region (OHRQoL). The following databases were searched: PubMed, EMBASE, CINAHL, Scopus, and LILACS. S. Almadadi, E.; Bauman. (2021) While periodontal disease is linked to a variety of risk factors, the disease burden is disproportionately high in low-income communities. The goal of this study was to see how successful a personalized oral health education program combined with routine dental treatment was among people from poor socioeconomic backgrounds. There were no differences between the two groups in any of the clinical outcomes studied. When compared to regular restorative dental care, the tailored oral health education program used in the current study did not appear to offer substantial improvement to clinical periodontal health outcomes. Opydo-Szymaczek et al. (2021) The goal of this cross-sectional study was to determine the prevalence of dental caries and the factors that influence dental service utilization in a community of 7-year-old children. Oral examinations of 7-year-old students were conducted, as well as socio-medical studies of their parents/legal caregivers. It took place in five primary schools across two provinces: Greater Poland and Lubusz. The dental exam was carried out in accordance with World Health Organization (WHO) guidelines. Even though children are entitled to free dental treatment, socioeconomic



considerations nevertheless influence the use of dental services in Poland. The poor oral health condition of the population studied, as well as a lack of regular dental check-ups, highlights the need to improve oral health literacy among parents and children, as well as promote correct attitudes about dental care. Taufan Bramantoro (2020) Oral health issues can have a variety of negative consequences for overall health, including physical fitness and performance. We wanted to conduct a systematic assessment of the current research to determine the impact of dental health on overall physical fitness in this study. We conducted a thorough literature search in two separate databases (PUBMED and EMBASE) without regard to publication year. If the subjects were humans and the primary goal was to analyze the effects of dental and/or oral health concerns on physical activity using objective physical measurements or physical performance tests, the article was included. This study reveals that poor dental and/or oral health has a negative impact on physical fitness and performance. Trumello et al. (2020) The main aim of this study was to investigate the psychological adjustment of healthcare professionals during the peak of the COVID-19 pandemic, evaluating differences according to working or not with patients affected by COVID-19 and in areas with a more severe spread of this pandemic. Healthcare professionals' attitudes toward psychological support were analyzed. Buselli et al. (2020) The aim of the present study was to identify the possible impact of working contextual and personal variables (age, gender, working position, years of experience, proximity to infected patients) on professional quality of life, represented by compassion satisfaction (CS), burnout, and secondary traumatization (ST), in HCWs facing COVID-19 emergency.

Benjamin Y Q et al (2020) conducted a cross sectional study on psychological impact of COVID-19 among 470 health care workers in Singapore. Findings revealed 7-15% of participants suffer from anxiety, depression and stress and prevalence of anxiety was more among nonmedical healthcare workers than medical personnel. Preti E et al (2020) conducted a systematic review of studies related to impact of epidemic/Pandemic outbreaks such as SARS, MERS, COVID-19, Ebola and influenza A. Lai J et al (2020) conducted a cross sectional, survey-based study on 1257 HCWs in 34 hospitals in China. Findings of



study showed considerable proportion of HCWs reported depressive symptoms (50.4%), anxiety (44.6%), insomnia (34%) and distress (71.5%). Stojanov J et al (2020) conducted a cross sectional, web-based study on quality of Sleep (QoS) and health related quality of life (HRQoL) among 201 HCWs. Zhou Q et al. (2020) conducted a cross sectional study on influence of workload, mental health, and professional quality of life (QoL) and hand hygiene practices among 1734 HCWs during COVID-19 Pandemic. Philip J et al (2020) conducted a thematic literature review of 900 studies related to factors affecting the psychological wellbeing of health care workers during four recent epidemics/pandemics: COVID-19, Ebola, MERS, and SARS. Findings revealed pandemics had profound impact on psychological well-being of HCWs. Braquehais M D et al (2020) conducted a systematic review on 30 studies published in MEDLINE, Web of science and Google Scholar related to impact of the COVID-19 pandemic on the mental health of healthcare professionals. Findings revealed most studies reported high prevalence of anxiety and depressive symptoms among HCWs and associated with COVID-19 exposure, epidemiological issues, material resources, human resources, and personal factors. Hashmpour R et al (2019) conducted a descriptive and correlational study on quality of work life and organizational commitment among 51 Iranian emergency nurses. Peres, M. A., Macpherson, L., Weyant, R. J., Daly (2019) Oral diseases are among the most common diseases in the world, and they have significant health and economic consequences, lowering people's quality of life. Akter, (2018). A human's basic priority is to maintain dental health by identifying frequent disorders, receiving adequate treatment, and raising knowledge about dental health. The major goal of this research is to raise public awareness about common dental disorders and to improve people's knowledge about how to maintain good dental health. Herkrath et al. (2018) because there is a significant disparity in the use of dental services in Brazil, they devised a study to assess the relationship between contextual and individual characteristics and the use of dental services by Brazilian individuals. Maniyar et al. (2018) A cross-sectional study was done among 200 insured and uninsured patients to examine awareness and attitudes concerning dental insurance, as well as inclinations toward dental care



consumption. Yap, Adrian. (2017) Oral health is crucial for overall health and a good quality of life. Oral health is described by the World Health Organization (2012) as a condition of being free of mouth and facial pain, oral infections and sores, and oral and other disorders that impair a person's ability to bite, chew, smile, talk, and maintain psychological well-being. Lawal et al. (2017) in Nigeria recorded the dental caries experience and treatment needs of an adult female population because they considered that adult females' dental caries experience and knowledge are crucial for preventing dental caries among family members, especially youngsters. Kakade SP et al. (2017) Residents of Nimbut Village, Maharashtra, India, participated in a cross-sectional study utilizing a structured interview to analyze their perceived needs, utilization, and constraints.

## 2. Objectives:

- (1) To assess the quality of life of HCWs involved in COVID-19 prevention, control, and treatment in dedicated COVID-19 hospitals.
- (2) To study the sociodemographic determinants affecting the quality of life of HCWs.

## 3. Research methodology

3.1 Research approach: Quantitative research approach

3.2 Research design: Descriptive research design

3.3 Population: HC workers involved in direct patient care during C-19 PD

3.4 Sampling technique: Purposive sampling

3.5 Setting: Selected tertiary care hospitals

3.6 Sample size: 700

3.7 Data analysis: Data were entered in Statistical Package for the Social Sciences (SPSS) 24. Univariate analysis was done to check the data entry. The bivariate analysis included student's *t*-test for parametric data and chi-square test for categorical data. Data were summarized in appropriate tables and graphs along with appropriate measures of central tendency. Relevant subgroup analysis was done



based on gender, age, profession, specialty, and type of care provided. Multivariate analysis was done to assess the key determinants impacting the Quality of Life (QOL) score among HCWs.

**3.8 Data collection:** The list of HCWs working at the study site was made by the investigators. The HCWs were contacted via phone and then an online Google form was sent via email. The period of the survey was June to July 2020. We assessed their quality of life while working with COVID-19 patients or suspects in the hospital. Repeat reminders were given after 7 days. A maximum of three reminders were given to every study participant who agreed to enroll in the study. Email reminders were followed up by telephonic reminders to ensure participation and reduce the dropout rate.

**4. Results:**

This survey is conducted to understand the quality of life and its key determinants among HCWs during the COVID-19 pandemic in a low middle-income country like India. It will be essential to understand the overall well-being of health workers and suggest policy measures that can address the same.

**TABLE 1: FEELING OF SELF HEALTH AT RISK**

S. No	Options		HC Workers		
			Nurses	NA	NT
1	Strongly Agree	F	150	95	296
		%	<b>85.71</b>	<b>54.29</b>	<b>84.57</b>
2	Agree	F	25	68	39
		%	<b>14.29</b>	<b>38.86</b>	<b>11.14</b>
3	Neutral	F	0	12	15
		%	<b>0.00</b>	<b>6.86</b>	<b>4.29</b>
4	Disagree	F	0	0	0
		%	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>





5	Strongly disagree	F	0	0	0
		%	0.00	0.00	0.00
Total			175	175	350

Source: primary data.

The findings for "feeling of self-health at risk" are displayed in Table 1. According to the table, among nurses 85.71% strongly agree, 14.29% agree and 6.29% disagree about the feeling of self-health at risk, among NA 54.29 % strongly agree, 38.86% agree and 6.86% were neutral in their opinion, among NT 84.57% strongly agree, 11.14% agree and 4.29% were neutral in their opinion about the feeling of self-health at risk.

According to the results, "more than 94% of respondents from the chosen hospital were pleased regarding the level of assistance provided to EPs." The weighted average method is used to examine the data while taking respondents' ratings into account.

The respondents 'Agree' rating of the support they receive from hospitals is reflected in the result value of 3.94.

**TABLE 2: DISTURBED SLEEP PATTERN AFTER COVID DUTY**

S. No	Options	HC Workers			
			Nurses	NA	NT
1	Strongly Agree	F	132	126	234
		%	75.43	72.00	66.86
2	Agree	F	21	43	101
		%	12.00	24.57	28.86
3	Neutral	F	7	6	15
		%	4.00	3.43	4.29
4	Disagree	F	15	0	0
		%	8.57	0.00	0.00
5	Strongly disagree	F	0	0	0
		%	0.00	0.00	0.00





<b>Total</b>	175	175	350
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Source: primary data.

Results for "Disturbed sleep pattern after C-19" are shown in Table 2. According to the table, among nurses 75.43% strongly agree, 12% agree, 4% were neutral and 8.57 % disagree to have disturbed sleep pattern after C-19, among NA 72% strongly agree, 24.57% agree and 3.43% were neutral in their opinion, among NT 66.86% strongly agree, 28.86% agree and 4.29% were neutral in their opinion about disturbed sleep pattern after C-19.

According to the results, "more than 90% of respondents from the chosen hospital scored as 'agree' towards staff competency towards work process and its administration."

The weighted average method is used to examine the data while taking respondents' ratings into account. The respondents 'Agree' rating of the staff's competency about the work process and its management is reflected in the result value of 3.91.

**TABLE 3: DEHYDRATED DURING COVID DUTY**

S. No	Options		HC Workers		
			Nurses	NA	NT
1	<b>Strongly Agree</b>	<b>F</b>	67	112	130
		<b>%</b>	<b>38.29</b>	<b>64.00</b>	<b>37.14</b>
2	<b>Agree</b>	<b>F</b>	78	45	87
		<b>%</b>	<b>44.57</b>	<b>25.71</b>	<b>24.86</b>
3	<b>Neutral</b>	<b>F</b>	12	0	56
		<b>%</b>	<b>6.86</b>	<b>0.00</b>	<b>16.00</b>
4	<b>Disagree</b>	<b>F</b>	15	18	45
		<b>%</b>	<b>8.57</b>	<b>10.29</b>	<b>12.86</b>
5	<b>Strongly disagree</b>	<b>F</b>	3	0	32
		<b>%</b>	<b>1.71</b>	<b>0.00</b>	<b>9.14</b>
<b>Total</b>			175	175	350

Source: primary data.



The findings for "dehydrated during C-19 duty" are presented in Table 3. According to the chart, among nurses 38.29% strongly agree, 44.57% agree, 6.86% were neutral, 8.57% disagree and 1.71% strongly disagree to being dehydrated during C-19 duty, among NA 64% strongly agree, 25.71% agree and 10.29% disagree in their opinion, among NT 37.14% strongly agree, 24.86% agree, 16% were neutral, 12.86% disagree and 9.14% strongly disagree in their opinion about being dehydrated during C-19 duty.

According to the results, "the majority of respondents of the chosen hospital evaluated as 'agree' towards leadership are a role model for other hospitals." The weighted average method is used to examine the data while taking respondents' ratings into account. The outcome value is 3.83, meaning that respondents agreed that the leadership in the hospital should serve as a model for other hospitals.

According to the findings, "more than three-fourths of respondents of chosen institutions under research" are happy with EP security and safety.

**TABLE 4: PROVISION OF GOOD QUALITY PPE**

S. No	Options		HC Workers		
			Nurses	NA	NT
1	Yes	F	64	53	112
		%	<b>36.57</b>	<b>30.29</b>	<b>32.00</b>
2	No	F	59	26	56
		%	<b>33.71</b>	<b>14.86</b>	<b>16.00</b>
3	Don't know	F	52	96	182
		%	<b>29.71</b>	<b>54.86</b>	<b>52.00</b>
3		F	0	0	0
		%	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>			175	175	350

Source: primary data.



The findings for "provision of good quality PPE" are displayed in Table 4. According to the table, among nurses 36.57% agreed to have provision of good quality PPE, 33.71% denied and 29.71% don't know about the same, among NA 30.29% agreed, 14.86% denied and 54.86% don't know about the same, among NT 32% agreed, 16% denied and 52% don't know about the provision of good quality PPE or not.

Despite all other efforts, the outcome reveals that "more than three-fourth of respondents of chosen institutions under research" believed that patient TRM was negatively impacted by the lack of materials.

**TABLE 5: AVAILABILITY OF LEAVE DURING COVID DUTY**

S. No	Options		HC Workers		
			Nurses	NA	NT
1	Yes	F	17	21	52
		%	<b>9.71</b>	<b>12.00</b>	<b>14.86</b>
2	No	F	158	154	298
		%	<b>90.29</b>	<b>88.00</b>	<b>85.14</b>
3	Don't know	F	0	0	0
		%	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
3		F	0	0	0
		%	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>			175	175	350

Source: primary data.

The findings of "availability of leave during C-19 duty" are displayed in Table 5. According to the data, among nurses 9.71% agreed they have availability of leave during C-19 and 90.29% denied of the same, among NA 12% agreed and 88% denied about the same, among NT 14.86% agreed and 85.14% denied about the availability of leave during C-19. Therefore, "the majority of respondents of selected hospital claimed they are aware of leave requirements to be observed by them," according to the report.



**TABLE 6: SATISFIED WITH THE ORGANIZATIONAL PROTOCOLS**

S. No	Options		HC Workers		
			Nurses	NA	NT
1	Yes	F	83	78	153
		%	<b>47.43</b>	<b>44.57</b>	<b>43.71</b>
2	No	F	79	75	128
		%	<b>45.14</b>	<b>42.86</b>	<b>36.57</b>
3	Don't know	F	13	22	69
		%	<b>7.43</b>	<b>12.57</b>	<b>19.71</b>
4		F	0	0	0
		%	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>			175	175	350

Source: primary data.

The findings for "satisfied with the organizational protocols" are displayed in Table 6. According to the table, among nurses 47.43% agreed they are satisfied with the organizational protocols, 45.14% denied and 7.43% don't know about the same, among NA 44.57% agreed, 42.86% denied and 12.57% don't know about the same, among NT 43.71% agreed, 36.57% denied and 19.71% don't know whether they are satisfied about organizational protocols or not.

### 5. Conclusion:

Our study conducted in COVID dedicated hospitals of Delhi. We tried to assess the quality of life among treating HCWs, their satisfaction with the environment, and other extraneous factors that can potentially impact the quality of life and their fears to contract the disease. Similar studies have been done for pandemics that came in past and for COVID-19 globally. The results have conclusively proven significantly poor quality of life and significant mental and physical health effects on HCWs in pandemics, outbreaks, and disaster-like situations. The determinants of poor QOL are near about the same across



studies. Preti et al. found that there is empirical evidence across various pandemics that underline the need to address the detrimental effects of epidemic/pandemic outbreaks on HCWs' mental health. Recommendations should include the assessment and promotion of coping strategies and resilience, special attention to frontline HCWs, provision of adequate protective supplies, and organization of online support services. In a study by Tran et al., physical activity and higher Health literacy (HL) were found to protect against anxiety and depression and were associated with higher Health-Related Quality of Life (HRQoL). Unexpectedly, smoking and drinking were also found to be coping behaviors. It is important to have strategic approaches that protect HCWs' mental health and HRQoL. The goal of the reviews was to evaluate the nature of WL for MC takers and paramedics in an example of emergency clinics from the public areas, as well as to recognize the factors that influence how fulfilled respondents in the example were with their positions. The 700 example respondents who took part in the field study and IDV meeting procedures were utilized to accumulate direct data for this reason. The responders were picked indiscriminately from among the many reviews related offices. To create precise outcomes, the information was curbed into proper tables, and afterward measurable apparatuses like ANOVA, rate, Cranach's alpha, mean, and SD were utilized to examine the information. This permitted us to decide how well the respondents acted in their work lives.

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