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IMPACT OF COVID-19 ON HEALTHCARE WORKERS IN INDIA: AN EMPIRICAL RESEARCH

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Abstract

The COVID-19 pandemic has posed a devastating impact on business and healthcare. The following study has been focused on evaluating the impact of the pandemic on the workers associated with the Indian healthcare sector. This study aims to elaborate on the role healthcare workers took during the pandemic as well as the issues and challenges faced by the workers while providing essential health services. The Literature Review section has explored several important aspects associated with the role, challenges and government actions of healthcare professionals during the pandemic. An SPSS analysis has been followed in order to analyse and interpret secondary quantitative data collected from reliable and valid government websites and other reliable reports. The findings revealed that the pandemic has presented crucial challenges for the workers associated with the healthcare sector in India. The workers have faced physical, mental as well as psychological stress and a significant number of healthcare professionals have been infected and died too. Consequently, the Indian government has taken efficient initiatives to support these health workers and assured physical and financial well-being during the pandemic crisis.

1. Introduction

1.1 Background of the study

India has witnessed a compatible scenario of the COVID-19 pandemic situation since the beginning of July 2020. The pandemic situation has thrown significant challenges in multiple areas. Among them, healthcare workers face both mental and physical risks while dealing with the pandemic. The situation has put extreme stress on the healthcare workforce in India depending on the rapid growth of patient numbers. Healthcare workers have played a vital role in serving proper care to infected people. Mental health barriers among healthcare workers affect motivation, proficiency, and enhance the risk of emotional fatigue, and obstruct the healthcare reaction to COVID-19. Panic and stress among healthcare workers even have made a shortage that impacted the treatment process at the beginning. They also have continued to experience ethical challenges based on limited knowledge about the unknown virus. Thus, the Indian government has implemented several initiatives for supporting the treatment process.

This report shows documentation pointing to overburdening of the healthcare workforce as well as resource obstruction during the pandemic situation in India. The main desire of this

paper is to shed light on the impact of the pandemic situation on healthcare workers and also to serve potential recommendations to reduce this burden.

1.2 Aim and objectives

The objectives that have been selected by the researcher are:

- To understand the challenges in healthcare sectors during COVID-19 in India
- To evaluate the impact of COVID-19 on healthcare workers in India
- To identify the government initiatives for healthcare workers in India during COVID-19

2. Literature Review

2.1 Role of healthcare workers

Healthcare workers take a vital role in providing healthcare services to local communities. During the COVID-19 pandemic, India has witnessed a crucial situation for the healthcare sector and the workers have played a vital role in responding to the pandemic. Apart from this, increased patient stress and a high risk of infection have created challenges for the workers (Suryavanshi et al. 2020). Healthcare workers are responsible for improving the access to healthcare and associated materials to the population along with creating awareness about diseases and healthy habits. On the other hand, these professionals support and collaborate with other members of the healthcare sector and promote healthy habits.

Healthcare workers are also responsible for creating knowledge and providing "technical guidance" for strengthening healthcare access. They maintain interaction with "health networks" and ensure support and improvement for the healthcare system (Who, 2022). During the pandemic, these workers have taken vital roles to create awareness of the essential medications and hygienic habits for responding to the virus. Along with that, healthcare professionals have also participated in vaccinations, identification and isolation of infected populations and enabling access to essential medicines to the population. These workers have provided vital service during the pandemic by creating awareness, identifying and isolating infected people and communicating with the government authorities for taking efficient approaches in response to the pandemic crisis.

2.2 Problems in healthcare sectors during COVID-19 in India

The COVID-19 pandemic has introduced destructive challenges for the healthcare sector as well as for the workers associated with this sector. These workers have remained at the forefront in responding to the pandemic crisis and have faced severe problems. The virus responsible for the diseases spreads through communication and interactions and healthcare workers have faced severe issues due to a lack of "personal protective equipment" (Viplav, 2020). Healthcare professionals have suffered "long working hours" that affected their mental and physical well-being as well as work-life balance.

In the vault of 2020, at the onset of the COVID-19 pandemic situation, with the rest of the economy, the healthcare sector of India experienced an acute drop in employment and revenues. Health employment fell by ***8.13%*** compared to the previous year based on the record of April 2020 which has been identified as an unparalleled drop (Healthsystemtracker.org, 2020). A lack of quality assurance, medical professionals, and

inadequate health spending is the remarkable areas that impacted negatively the healthcare sectors in India.

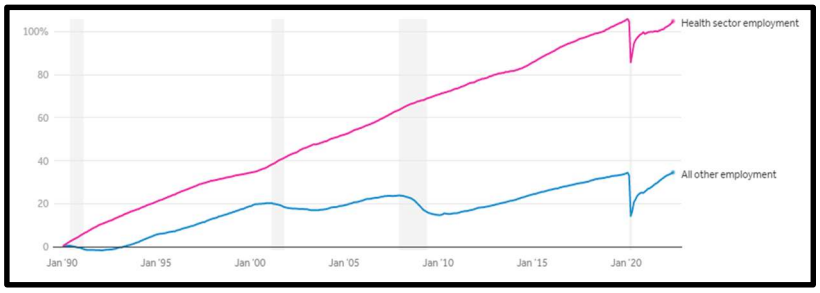

Figure 2.2.1: Percent change in the health sector

(Source: Healthsystemtracker.org, 2020)

2.3 Impact of COVID-19 on healthcare workers in India

The pandemic situation has disclosed healthcare workers and their families to an unequalled magnitude of risks. In India, the infection of the corona virus has become widespread which leads healthcare workers to the highest burden of reducing Covid. As per the view of Raj et al. (2020), healthcare workers have been identified as the backbone for playing the role of *"management and control of the burden of death and diseases"* during the pandemic situation. The situation has put the uttermost stress on the healthcare workers which pushes to workforce shortages as well as developed healthcare worker exhortation, burnout, and trauma.

In addition to this, the total employment in the Indian healthcare industry diminished during the early months of the pandemic which has rapidly recovered since the summer of 2020. Handling the virus effect and providing accurate treatment also become challenges for healthcare workers as the virus remains unknown for all (Gupta & Sahoo, 2020). In 2020, "Life expectancy at birth" was enhanced to ***69.6 years*** from the expected ***47.7 years*** in 1970 (Who.int, 2020). Barriers in both hospital and outpatient settings have been found in India during the pandemic situation.

2.4 Government initiatives for healthcare workers in India during COVID-19

Under the ***"India COVID-19 Emergency Response and Health Systems Preparedness Package (COVID Package)"***, the government of India has supplied strong financial support to protect the health of citizens. Besides this, with the support of ***"The Ministry of Health and Family Welfare (MoHFW)"***, the government also serves some crucial types of equipment to lead the treatment process such as ventilators, N95 masks, PPEs, and others. As opposed to Chaturvedi & Singh (2021), during 2021-2022, a scheme on "India Covid-19 Emergency Response and Health Systems Preparedness Package - Phase-II" (ECRP-Phase-II) has been implemented to support the health and well-being departments.

In order to fight against the challenges of COVID-19, the Indian government has launched a ***"Centrally Sponsored Scheme of National AYUSH Mission"***to balance the cost of treatment. Depending on this, ***12,500 "AYUSH Health & Wellness Centres"*** have been opened to set the health care ministry in a new aspect (Gov.in, 2021). As observed by Roy et al. (2021), the Indian government contributed ***Rs.23,123 crores*** to strengthen national health systems in 2021. In addition, 18,000 Oxygen Concentrators also have been sent to several states in India. Extra hospitals, beds, medicines, and equipment have been provided by the government.

2.5 Theoretical perspective

Under the pressure of the pandemic situation and increasing stress among healthcare workers, there needs a supporting theory that can help the healthcare workers to be more efficient and productive to serve better service to handle the negative impact of the pandemic. In this regard, ***"Maslow's Hierarchy of Needs"*** is identified as one of the most effective human motivational theories. As stated by Hopper (2020), it has five different steps that are able to fulfill an individual's five core needs to be based on human emotions for human behavioral motivation.

- ***Physiological needs:***

It refers to the basic human survival needs that involved shelter, food, and proper living things. In this regard, healthcare workers need proper living equipment and facilities that can enhance their confidence level in the government. Physiologic fulfillment can provide an individual with a commitment to responsibility.

- ***Safety needs:***

Safety is another crucial area that needs proper attention as healthcare workers have become stressed due to treating infected people. Providing security and safety can become salient for healthcare workers as they are directly connected with the risk area (Poirier & Devraj, 2019). This also can assure the family members of an individual that they are within a safe boundary. It has the ability to charge their mental condition and enhance their productivity while taking care of the infected people.

- ***Love and belonging needs:***

It is one of the essential needs of humans that can support increasing mental and emotional satisfaction and developing productivity. Human emotional requirements for affiliating interpersonal relationships are common as these can play the role of supporting mental issues of the healthcare workers and influence them to be more efficient towards their responsibilities.

- ***Esteem needs:***

In esteem needs, self-respect is essential that can help an individual to provoke to do something that will increase self-esteem. It is very common to expect an acknowledgment from others as they are playing a crucial role in treating the patient. For healthcare workers, giving respect from the higher authorities and government can play a vital role in balancing their respect and acknowledgment.

- ***Self-actualization needs:***

It refers to the self-satisfaction level that can be gained by proper maintenance of the given responsibility. Providing essential training, equipment and information can help healthcare workers to fulfill self-actualization.

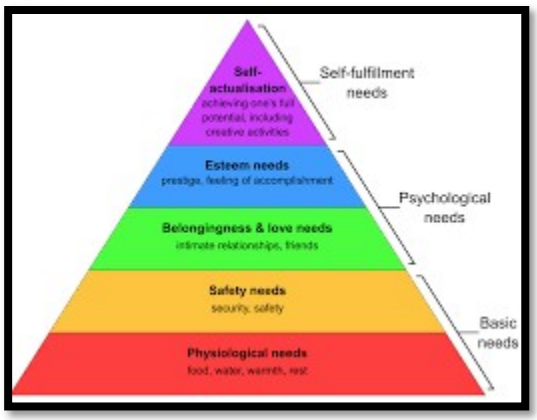

Figure 2.5.1: Maslow's Hierarchy of Needs

(Source: Influenced by Hopper, 2020)

2.6 Literature gap

Appropriate steps have been taken for conducting this study, but some limitations affected the study significantly. The research study bears some gaps due to lack of time and lack of proper information about the current rate of Covid-19 patients and its impact on health workers.

3. Methods

The quality of any research paper depends on the adoption of methods and their application.

- ***Research philosophy:***

In order to lead this research study, a ***"positivism research philosophy"*** is selected as it is highly structured and able to control large-size data (Alharahsheh & Pius, 2020). Accompanied by this philosophy the researcher is free from the study and there are no provisions for human interest within the research.

- ***Research approach:***

The research approach refers to the plans to conduct the study to extract relevant information. In this paper, the ***"inductive research approach"*** is considered as concerned with developing known premises which are to be used (Pearse, 2019). As in this study, the researcher has developed a theory, which is identified as suitable for this particular study to generate untested conclusions.

- ***Research design:***

Research design is the outline that has been selected by the researcher to conduct the particular study. It allows the researcher to modify the research method to get a better outcome (Sundler et al. 2019). Based on the requirements, a ***"descriptive research design"*** has been proven beneficial for this study. It is most useful as depending on it all the aspects can be evaluated perfectly.

- ***Data collection process:***

Data collection is a vital area in a research study that helps the researcher to find out relevant information related to the specific topic (Ruggiano & Perry, 2019). In this research study, the research has selected the ***"secondary quantitative data collected method"*** to collect

all the relevant data and information on India. The researcher has chosen five specific states of India where COVID-19 impacted healthcare workers. The data has been collated through both an ***excel file*** and ***IBM SPSS software***.

- ***Data analysis process:***

Data analysis is regarded as the essential part of any research as the collected data is required to be analysed for making any decision. The objective of the data analysis is to extract valuable information from the collected data (Tscholl et al. 2018). There are various methods of data analysis; however, as secondary quantitative data have been collected, ***statistical analysis*** has been selected as beneficial to identify the situation of healthcare workers in India during the pandemic. In this study, the statistical analysis has been done through ***IBM SPSS software*** as it is the most effective statistical analysis software for evaluating data.

4. Results and Discussion

4.1 Results

Descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Total confirmed	5	1336467	3594198	2279042.60	824843.855
Cured/Discharged	5	1327181	3556022	2256975.20	815270.301
Death	5	9205	38049	22007.20	11121.193
Medical Nurses	5	12854	308812	123299.20	112951.767
Hospital Beds	5	13844	99435	63590.80	43620.038
Valid N (listwise)	5				

Figure 4.1.1: Descriptive statistics

(Source: SPSS)

Due to establishing a positive relationship among research variables, "descriptive statistics" is identified as one of the effective tables in SPSS software. In order to explain the output and describe the features of the data set, this table is highly effective. In the words of Mishra et al. (2019), this table is considered an "informational coefficient" that is helpful in splitting the research variables into small sections to prepare the entire calculation validly and authentically. The table contains some specific columns such as "minimum value", "maximum value", "mean value" and "standard deviation". Thus, the table can be interpreted and explored in a better way with the help of values of "standard deviation". The "standard deviation" values are ***824843.855, 815270.301, 11121.193, 112951.767,*** and ***43620.038***. The values are indicating that the research variables have a positive relationship.

Bar chart analysis

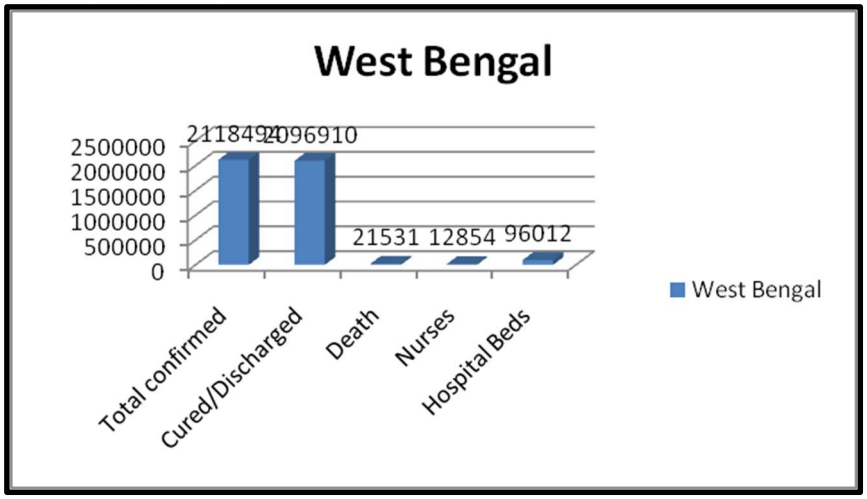

Figure 4.1.2: COVID impact in West Bengal
(Source: SPSS)

According to the above bar graph, it has been understood that in West Bengal total COVID confirmed cases were ***2118494*** which was a huge number. Among them, ***2096910*** of the patients have been discharged. Thus, not getting the right treatment at the right time the death number was ***21513***. The state government has increased the number of nurses and become ***12854*** during pandemics. In addition, ***96012*** were the number of beds available in West Bengal in that situation.

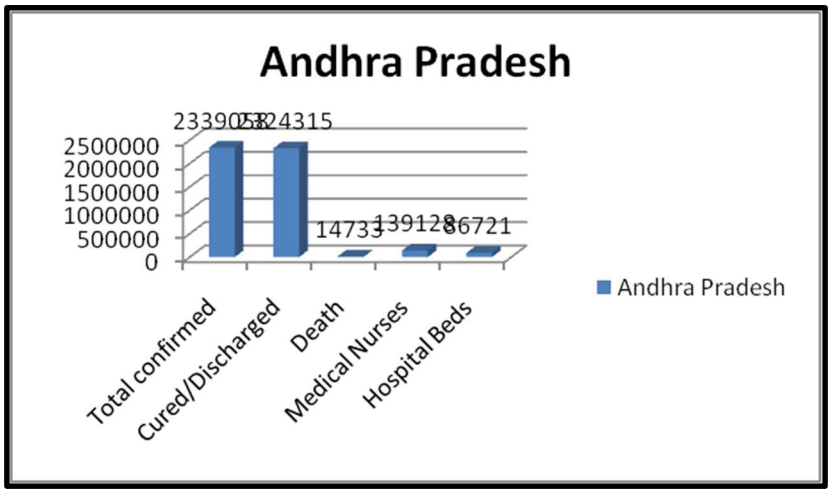

Figure 4.1.3: COVID impact in Andhra Pradesh
(Source: SPSS)

Based on the above bar graph, it has been recognised that the total COVID confirmed cases were ***2339058*** in Andhra Pradesh. Among them, ***2324315*** of the patients have been discharged after getting proper treatment. Thus, not getting the right treatment at the right time the death number was ***14733***. During pandemics, the number of nurses has become ***139128*** which has increased by the state government. In addition,in that situation ***86721*** were the number of beds available in Andhra Pradesh for the infected patients.

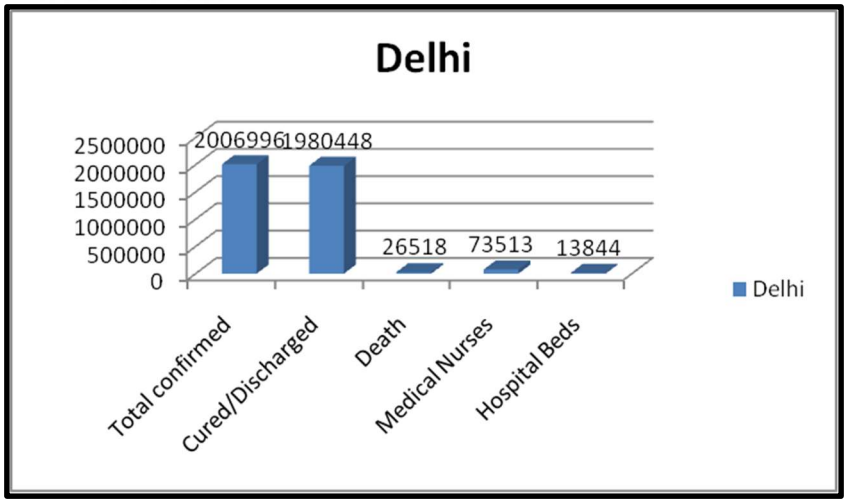

Figure 4.1.4: COVID impact in Delhi
(Source: SPSS)

The above bar chart has indicated that in Delhi the total COVID-confirmed cases were ***2006996*** in 2020. By getting better treatment and medication, a total of ***1980448*** patients have been discharged. On the contrary, ***26518*** patients also have died due to not getting proper medical attention at the right moment. During the pandemic situation, extra nurse force has been implemented by the state government and the number has become ***73513***. Along with this, the number o hospital beds also increased to ***13844*** to support the work of healthcare workers.

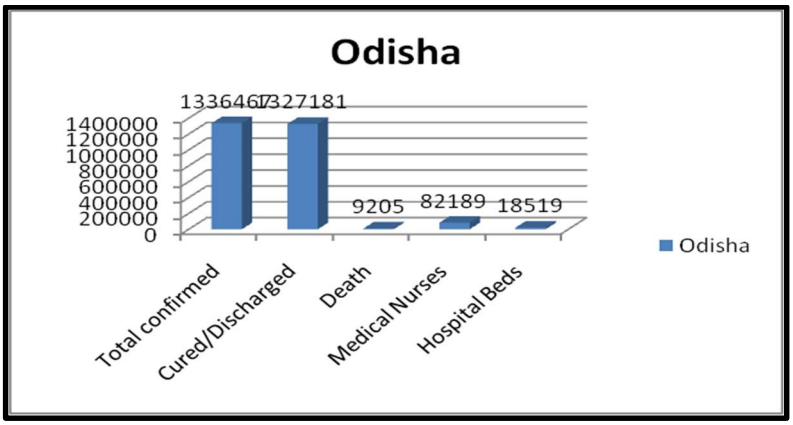

Figure 4.1.5: COVID impact in Odisha
(Source: SPSS)

According to the above bar graph, it has been understood that in Odisha total COVID-confirmed cases were ***1336467*** in 2020 which was a huge number. Among them, ***1327181*** patients have been discharged due to getting the right medical attention. Although not getting the right treatment at the right time the death number was ***9205*** which is lower than in many other states. The state government has increased the number of nurses and become ***82189*** during pandemics. In addition, ***18519*** was the number of beds available in West Bengal in that situation.

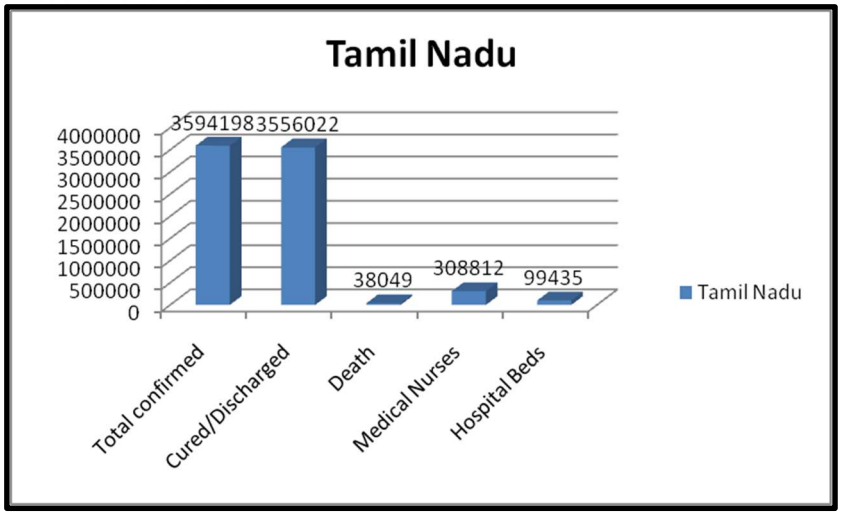

Figure 4.1.6: COVID impact in Tamil Nadu

(Source: SPSS)

Depending on the above bar graph, it has been identified that the total COVID confirmed cases were ***3594198*** in Andhra Pradesh. Among them, ***3556022*** of the patients have been discharged after getting proper treatment. Thus, not getting the right treatment at the right time the death number was ***38049***. During pandemics, the number of nurses has become ***308812*** which has increased by the state government. In addition,in that situation ***99435*** were the number of beds available in Andhra Pradesh for the infected patients.

Correlation analysis

Correlations

		Total confirmed	Cured/Discharged	Death	Medical Nurses	Hospital Beds
Total confirmed	Pearson Correlation	1	1.000**	.861	.845	.686
	Sig. (2-tailed)		.000	.061	.071	.201
	N	5	5	5	5	5
Cured/Discharged	Pearson Correlation	1.000**	1	.857	.846	.689
	Sig. (2-tailed)	.000		.063	.071	.198
	N	5	5	5	5	5
Death	Pearson Correlation	.861	.857	1	.640	.383
	Sig. (2-tailed)	.061	.063		.245	.525
	N	5	5	5	5	5
Medical Nurses	Pearson Correlation	.845	.846	.640	1	.375
	Sig. (2-tailed)	.071	.071	.245		.534
	N	5	5	5	5	5
Hospital Beds	Pearson Correlation	.686	.689	.383	.375	1
	Sig. (2-tailed)	.201	.198	.525	.534	
	N	5	5	5	5	5

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 4.1.7: Correlation analysis

(Source: SPSS)

Correlation analysis is a statistical method that displays how strongly two different variables are connected to each other. It is an important step in the SPSS evaluation process to highlight the association between the two research variables. In the correlation table, the "P-

value" is the main identical tool that is the indicator of the relationship between two variables that helps the researcher to measure the linear relationship among contrasting research variables. According to Andronicеanu et al. (2020), it can be described in a better way by depending on mainly P-value in the calculation part that tells about the variables within the 1 that is greater than the 0 (1>0). As in this table of "correlation analysis" there are a few numerical data that indicate as less than 1, it does not mention any weak relationship among research variables.

4.2 Discussion

Following the statistical analysis, it has become identified that in every state healthcare workers across India have suffered during the pandemic situation. As per the view of Choudhari (2020), since the virus's identity was totally unknown, the treatment was not found by the medical attendees. It remained very difficult for healthcare workers to manage the pressure of the extremely rising number of infected people overall in India. In this study, the research has selected five different states of India and collected data to meet the research objectives. The states are West Bengal, Andhra Pradesh, Delhi, Odisha, and Tamil Nadu. It has been understood that the total confirmed cases are ***2118494, 2339058, 2006996, 1336467,*** and ***3594198*** respectively (Mygov.in, 2020). At the beginning of the arrival of the corona virus, the treatment was entirely unknown and healthcare workers entirely try to treat people from their end.

Consequently, 2096910 patients were able to get discharged from the state of West Bengal, 2324315 from Andhra Pradesh, 1980448 from Delhi, 1980448 from Delhi, 1327181 from Odisha, and 3556022from Tamil Nadu (Mygov.in, 2020). Thus, many patients have died just because of not getting recognised for their current status and the treatment process. Depending on developing cases of healthcare worker burnout, the Indian government has implemented a few facilities to serve energy to the healthcare workers. As opined by Jain et al. (2021), due to COVID is a rapidly spreading disease that has served a negative impact on the healthcare workers by increasing their anxiety, stress levels, and panic disorder to treat patients. In order to manage the shortage of healthcare worker ratio, each state government has increased the number of nurses. In Tamil Nadu, the government has served a total of ***308812*** nurses (Ceicdata.com, 2020). In addition, in Delhi, the number of nurses has increased by ***73513*** (Hindustantimes.com, 2020). Accompanied by the support of increased hospital beds and nurses the treatment process during COVID has been managed in different states in India.

5. Conclusion and Recommendations

5.1 Conclusion

Healthcare workers are playing a central and critical role in modifying and controlling the quality of healthcare services during the COVID-19 pandemic situation in India. Due to a lack of proper knowledge and skills, the treatment process had become a major challenge for the health workers to deal with the negative situation. The medical attendees have tried to implement different types of treatment options to improve the health condition of the infected people at the beginning. In addition to this, healthcare workers have faced serious ethical challenges due to a lack of full protection for their health. Increasing awareness and efficiency, the responsible authority needs to be more focused to ensure the healthcare workers regarding

their safety and security.

5.2 Recommendations

There are various measures that can be suggested to improve the condition of healthcare workers in India and can help in the betterment of the treatment process in the country such as:
(i) Providing the accurate number of masks, medicine, and other equitable types of equipment in the COVID-19 pandemic situation.
(ii) Implementation of different effective training sessions needs to increase the skills and knowledge of the healthcare workers to enhance their productivity and efficiency.
(iii) Improving the conditions of existing healthcare centers is also important to improve the treatment system (Wilson et al. 2020). On this note, the government needs to launch new schemes and programs to encourage healthcare workers in India.
(iv) In the context of India, the government requires to provide suitable accommodations for medical attendees in every state. Moreover, encouraging general people as well as healthcare workers to implement the treatment option as supportive is really required.
(v) Adoption of advanced and modern technology in the medical department, the treatment process can be improved in a better way by that the recognisation of patient condition will be easy and simple to detect.

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