CAPACITY BUILDING OF HEALTHCARE PERSONNEL IN CORONAVIRUS CRISIS: A CASE STUDY OF PULWAMA (J&K)

Thesis Submitted for the Award of the Degree of

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in

PUBLIC ADMINISTRATION

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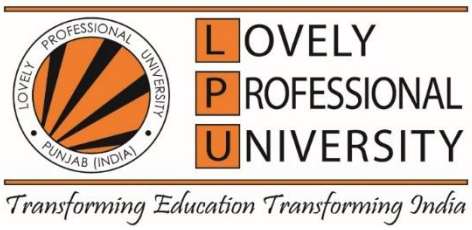

LOVELY PROFESSIONAL UNIVERSITY, PUNJAB
2023

DECLARATION

I hereby declared that the presented work in the thesis entitled "CAPACITY BUILDING OF HEALTHCARE PERSONNEL IN CORONAVIRUS CRISIS: A CASE STUDY OF PULWAMA (J&K)" in fulfilment of the degree of Doctor of Philosophy (Ph. D.) is the outcome of research work carried out by me under the supervision of Dr. Manvendra Singh, working as Associate Professor, Department of Government & Public Administration, School of Humanities, of Lovely Professional University, Punjab, India. In keeping with the general practice of reporting scientific observations, due acknowledgments have been made whenever the work described here has been based on the findings of other investigators. This work has not been submitted in part or full to any other University or Institute for the award of any degree.

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CERTIFICATE

This is to certify that the work reported in the Ph. D. thesis entitled "CAPACITY BUILDING OF HEALTHCARE PERSONNEL IN CORONAVIRUS CRISIS: A CASE STUDY OF PULWAMA (J&K)" is submitted in fulfilment of the requirement for the reward of the degree of Doctor of Philosophy (Ph.D.) in the Department of Government & Public Administration, School of Humanities, is a research work carried out by Tavseef Ahmad Mir, under Registration Number 11919633, is a bonafide record of his/her original work carried out under my supervision and that no part of the thesis has been submitted for any other degree, diploma or equivalent course.

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Abstract

Building flourishing societies requires fostering well-being and ensuring healthy lifestyles. A healthy society needs dynamic institutions of health service delivery. All nations share the goal of enhancing human health and ensuring that everyone has access to inexpensive, high-quality medical care. It is not just a moral and social requirement, but also a component of our economies and societies' long-term, sustainable growth. Having good health makes people feel better. Both workers and students learn better and produce productive outputs when they are in good health.

The outbreak of COVID-19 all over the world once again proved the necessity of having competent institutions of healthcare and capable personnel to manage them. This research focuses on studying the capacity building of healthcare Personnel in the context of the Coronavirus crisis in the district of Pulwama. Any healthcare program requires a strong and skilled human resources base. For the universal health program to be implemented successfully, trained human resources are required. The rising globalization of health service delivery poses a challenge to the public health sector's capacity to accept evidence and adapt locally to keep up with public health occurrences. The capacity building of the staff was analyzed through structured questionnaires, interviews, and Focused group discussions. The public healthcare institutions located within the district Pulwama were analyzed as well as information was collected from the general public, patients, healthcare workers, administrators, add other stakeholders within the district.

The SERVQUAL model was primarily used in this research work to gauge the level of services provided to the general public during the pandemic. The various determinants of this model helped to gauge the satisfaction level of the patients with respect to the services provided by healthcare personnel. Various aspects of healthcare services that reflected the capacities of personnel associated with COVID management were scrutinised. As the COVID contamination hit the district badly, it was felt that this research needs to be undertaken so that healthcare workers' processes and capacity-building activities get the limelight and are discussed. As the district is falling in between the capital Srinagar as well as Budgam, Shopian, etc., it was felt expedient to select this district as the research target to get a glimpse of South Kashmir’s pandemic healthcare capacity to handle pandemic diseases. Pulwama is one of the oldest districts and has administrative significance and is considered a gateway for the south in

the Kashmir division. As the pandemic hit the world, the district of Pulwama was also impacted badly. The administration of UT undertook the necessary measures like ordering more sophisticated equipment like Personal Protective Equipment (PPE) kits, oxygen-fitted beds, ventilators, enforcing social distancing, etc. The district administration of Pulwama tried its best to prevent the spread of this disease. Though this district ranked first in UT regarding good governance, the healthcare sector remained far behind expectations.

There was a shortage of manpower and infrastructure and a lack of technical know-how to combat disease. Less than 1.28 % of GDP is allocated to the healthcare budget, directly affecting the quality of output through services to the public. It was a tedious job for healthcare workers to meet the needs of this contagion. It was necessary to consider the viewpoint of healthcare workers who provided services during the trying circumstances, patients who availed of service, healthcare administrators, and other stakeholders. The central theme of this research was to find the role of healthcare personnel and lacunas in the capacity building of healthcare workers to combat COVID and suggest the appropriate measures. Healthcare workers were subjected to questionnaires, interviews, and focused group discussions. Their point of view was recorded separately for the patients who were given structured questionnaires in English and vernacular language. Interviews were also conducted with various patients. Their responses were considered in this research. The healthcare workers and key Stakeholders were subjected to focused group discussions in which their points of view regarding COVID-19, its management, and the role of healthcare workers and their capacities in the district were discussed. Throughout this research journey, it was found that the healthcare personnel deployed at various public healthcare institutions were ample concerning normal healthcare conditions. However, as COVID-19 was a unique experience for the healthcare administration, the established system could not bear the burden of such a tremendous flow of patients. This phenomenon of system breaking could be witnessed throughout the world. Various waves severely hit developing countries, including India. It is learned that the healthcare system had not planned to meet such circumstances because, during this research work, a significant portion of healthcare workers accepted that there were lacunas not in handling patients but in the skills and training imparted to them. There was not a well-defined policy. These imperfections led to deficiencies in service delivery. Patients who had contracted this disease first time in their life had a sorrower tale to tell. All levels of governance were caught in the doldrums during this outbreak. During this work, the author came to know so many heart breaking stories associated with the incompetence of healthcare workers to handle patients properly. Administrators at higher levels, including the policymakers, must review public

healthcare policies concerning the capacities of healthcare workers to meet the challenges of communicable diseases in future. This research work adds up to the knowledge repository of the policymakers and the persons associated with Public Administration as well as its ancillary fields. Suggestions provided in this work could help the healthcare system to withstand the pandemic situations in future.

Upgrading the health systems by adopting best practices, enhancing the number of skilled personnel, building the necessary infrastructure, and linking the training with performance appraisal systems are the requirements for better healthcare. It is better to have a vibrant policy to meet uncertain events in the future. Instead of being caught unaware, the government needs to act upon the shortcomings felt during COVID-19, so that the healthcare system becomes more resilient. Otherwise, knee-jerk reactions amount to, Making hay when the sun shines.

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I also want to express my gratitude to every respondent who gave their time so that I could finish the work on time. It was a cumbersome task for most healthcare workers and others associated with COVID-19 management to spare those moments. There is countless praise in store for them. Last but not least, I wish to state that to repay the debts of my mother, brother, and sister-in-law, even more than one life span is short, for their consistent and unwavering support in every aspect throughout my life and particularly during this research program. I offer

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Tavseef Ahmad Mir
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List of Abbreviations

NHP	National Health Policy
NPP	National Population Policy
HWC	Health & Wellness Centre
AYUSH	Ayurveda, Yoga, Unani, Siddha &
UN	United Nations
PPTCT	Preventing Parent-To-Child Transmission
ECG	Electrocardiography
CT	Computed Tomography
RTI/STD	Reproductive Tract Infections/ Sexually
IMNCI	Integrated Management of Newborn
NBSU	Newborn Stabilization Unit
SNCU	Sick Newborn Care Unit
MoHFW	Ministry of Health & Family Welfare
MCH	Maternal AND Child Health
ANM	Auxiliary Nursing Midwifery
AWW	Anganwadi Worker
PHC	Public Health Centre
ASHA	Accredited Social Health Activist
IMR	Infant Mortality Rate
LHV	Lady Health Visitor
NAAT	Nucleic Acid Amplification Test
NRC	Nutrition Rehabilitation Centre
DLHS	District Level Household Survey
MMR	Maternal Mortality Rate
NFHS	National Family Health Survey
ANC	Antenatal Care
COVID-19	Coronavirus Disease-19
PNC	Post Natal Care
OCP	Oral Contraceptive Pills
RT-PCR	Reverse Transcription Polymerase Chain Reaction
IUD	Intrauterine Devices
IFA	Iron & Folic Acid Supplements
TT	Tetanus Toxoid
CHC	Community Health Centre
CU-T	Copper -T
MDG	Millennium Development Goal
PHC	Public Health Centre
WHO	World Health Organisation
NPPHC	New Type Public Health Centre
NHM	National Health Mission
UNICEF	United Nations International Children's Fund

Chapter 1

Introduction

SARS - COV-2 or COVID-19, seriously impacted the economy and public health and posed an unexpected threat to worldwide society. On December 31, 2019, the national authorities in China notified the World Health Organization (WHO) of cases of pneumonia with unparalleled etiology in the Chinese city of Wuhan. The Chinese government determined the cause of the Pneumonia cases to be a brand-new virus called Coronavirus. A comprehensive family of viruses known as coronaviruses (CoV) can cause symptoms ranging from cough and cold to more severe problems. A new Coronavirus strain that people have not discovered before is known as a novel coronavirus (nCoV). In the first week of January 2020, the novel virus was subsequently given the moniker "Covid-19 virus. The spread of Coronavirus at such a pace was deemed a "Public Health Emergency of International concern" (PHEIC) by World Health Organisation on January 30, 2020. Raising the alarm bells, the pace of contamination increased with each passing day.

The WHO declared this disease a pandemic on 11th March, 2020, due to the sudden rise in cases outside China. By that time, 114 countries had received reports of more than 1,18,000 cases, and 4,291 fatalities had been noted. Around this time, Europe had become the hub of the pandemic, accounting for more than 40% of all confirmed cases worldwide. By April 2020, Europe accounted for 63% of all virus-related deaths worldwide.

As the COVID-19 outbreak in China started to draw attention from around the globe, India began to take preventative measures, such as thermal screening at international airports, in-flight alerts, issuing travel warnings, and establishing quarantine centers to provide immediate critical care. Global recognition of India's COVID-19 pandemic response has been received (Prakash et al., 2020). However, the lockdown has a cascading effect on different societal groups and has an economical cost at different levels. As containment and mitigation efforts persisted in disrupting manufacturing, education, the financial sector, and other aspects of society, the global economy imploded. In many sections of the country, this pandemic has forced a significant and reverse exodus from industrialized areas to the countryside. Indian roads were clogged with workers migrating back to their villages in search of coziness, security, and understanding. In preparation for the emergency crisis, the government moved to evacuate its citizens and those of neighbourly countries from the impacted countries. Following

protocol, the evacuated passengers were isolated and detained in quarantine facilities that had been mainly built or earmarked. Nevertheless, the quickly proliferating virus eventually made it to India, with one case being confirmed in Kerala on January 30, 2020. In the months that followed, more cases were documented.

This research focuses on the capacity building of healthcare workers in the Coronavirus crisis. This research project has been undertaken in the District Pulwama of Jammu and Kashmir (U.T.). This study tries to find the association between the capacities of healthcare workers and the service delivery of hospitals or other healthcare institutions during the Coronavirus pandemic. The main focus remains on enquiring about various aspects of capacity building of healthcare workers to meet coronavirus crises and other future pandemics of such nature. A vast family of viruses ranges in severity from the ordinary cold to more serious disorders like the Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome, including COVID-19, caused by coronaviruses (SARS-COV-2). Manifestation of this contraction takes place in the form of fever, cough, shortness of breath, and other respiratory ailments. Kidney failure and pneumonia were also found in various cases. On 11th March 2020, the World Health Organisation (WHO) declared COVID-19 a global pandemic indicating the level of the scourge in the spread of this contagious disease. The virus is highly lethal and infectious, leading to deaths in the most vulnerable section of society, mainly those older than 60 and with comorbidities.

The Coronavirus pandemic proved to be a defining global health crisis most extraordinary since World War second. In addition to health, it has resulted in socio-economic problems for almost every section of society. Globally as of 4th November 2022, 64 crore confirmed cases of COVID-19, including 66 lac deaths reported to the World Health Organization. Till 3rd November 2022, 4,46,57,149, confirmed cases are in India, with 5,30,461 deaths reported by the Ministry of Health and Family Welfare. Since the beginning of March 2021, the second wave has created havoc all over the country of India. Like all viruses, SARS-CoV-2, which produces COVID-19, evolves throughout time. Most mutations have little to no effect on the virus's lethality or contamination properties. The virus's characteristics, such as how quickly it spreads, the intensity of the infection it causes, or the efficacy of vaccines, therapeutic medications, diagnostic tools, and other national healthcare and social measures, may be affected by some alterations. There have been some mutations in the structure of the virus, which increased the lethality and spread of the disease. Different variants have taken a heavy toll on the Indian healthcare sector. On 10th May 2021, the World Health Organisation notified

that the B.1.617(Delta) variant first identified in India was a global concern variant. Omicron, Epsilon, Zeta, Eta, Theta, Iota, and many other variants were found in multiple countries. Different variants are spreading in many parts of the world. Because of increased trade and other means of communication, these variants continuously pose a threat to the health of the Indian population.

Historical background of the research problem

The pandemic "(Greek, Pan, "all" and demos, "people")" is a mass spread of a contagious disease that has a canvas over larger areas, like multiple continents of the world, affecting a massive number of people. Any illness with fewer infections does not qualify to be called a pandemic. Widespread infectious diseases with fewer infections, such as recurrences of regular flu, are generally left off the list of pandemics as they occur in large areas of the world rather than being carried through every nook and corner of the globe (Porta, 2008). Cambridge English dictionary defines a "pandemic as a dangerous disease that infects many people at one time."

Infectious diseases having pandemic potential have repeatedly appeared and spread throughout history. Major pandemics and epidemics have already impacted humanity, including the Flu, cholera, plague, Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV), and Middle East Respiratory Syndrome- Coronavirus (MERS-CoV). Because of increased human contact with animals as a result of domestication, scavenging, and global trade activities, zoonotic pathogens—infectious diseases that can spread to pandemics—have been transmitted to humans, resulting in the novel Coronavirus disease of the 2019 (COVID-19) pandemic that is currently affecting the entire world. Human history is full of incidents of pandemic diseases like smallpox, tuberculosis, cholera, and others. The epidemic in Athens (430 - 427 BCE) is the starting point for these diseases in human history. The most devastating pandemic disease was the black death (the plague) in the history of health administration, which resulted in the death of 75 – 200 million people during the 14th century. The term pandemic was not used earlier, but it began to be used during the Spanish flu(influenza) pandemic of 1918.

In 1896, epidemics started in India and eventually spread to every state. Up to 1930, 3.5 million deaths were reported in the province of Punjab alone, the most significant number of any

province. In 1901 and 1903, Jammu and Rawalpindi were affected by it. In common parlance, it was known as “Tawoon.” The authorities in Kashmir were made aware of the outbreak in Jammu. According to a notification published by the British Resident in Srinagar, all visitors must undergo a medical check-up before entering Kashmir. There were test centers stationed along each of the six routes. Rawalpindi and Jammu were close to the Kashmir valley, which was done to keep the plague away. At the entrances to the former kingdom and the Kashmir valley, Kohala and Uri, respectively, there were placed, medical inspectors. Every incoming passenger's health and the temperature had to be checked by them. The precaution was successful in preventing Kashmir from being infected.

A pandemic is a widescale disease that does not have a global pan occurrence but must be spreading on a large scale. Several weeks after the conditions for the designation of a conventional pandemic had been satisfied in 2009, WHO proclaimed the SARS as a pandemic. The connection between the official announcement of a pandemic and the production of a pandemic-specific vaccination undoubtedly contributed to the delay. The proclamation would not have needed to be tied to vaccine manufacturing if a traditional pandemic definition had been employed. This may have been accomplished using a severity index, and a pandemic-specific vaccination might have been viewed as superfluous based on the availability and caliber of the emerging severity data. We have examples of many diseases that have been the real challenges for world healthcare, but they do not qualify for pandemics. Cancer, diabetes, cardiovascular problems respiratory ailments are the leading causes of death worldwide, but they are not pandemics.

Like the rest of the world, South Asia faces the COVID-19 pandemic on various fronts. India, the second largest populated country, is continuously toiling hard to manage the situation. District Pulwama falls within the Union Territory of Jammu & Kashmir. Eighteen thousand three hundred ninety-eight cases were positive up to 13th February 2022 in Pulwama. Out of which eighteen thousand one hundred and nine recovered. At present, vaccines have been formulated by various healthcare companies and organizations. Prioritized vaccination depended upon vulnerability as well as the task among frontline workers, comorbid persons, old age, and other age groups. Later on, its ambit was widened to all age groups above 18 years. Research is underway to investigate the efficacy of the vaccine on children. In addition to the two vaccine doses, there is a precautionary dose to augment the immune system against such infections. The majority of the population in India has been vaccinated, and the process is continuing. (72.7% of the population is vaccinated in the first dosage and 68.2% are fully

vaccinated. (cowin.gov.in accessed on 4th November 2022) Covaxin, developed by Biotech, was the first Indian-manufactured vaccine. Covishield, Covaxin, Sputnik V, and Corbevax are the primary vaccines used in the vaccination drive against the epidemic. 2 Deoxy-DeGlucose, DRDO developed D2G, and many more drugs and vaccines are at the trial stage to be used for various age groups in India.

Statement of the Problem

Health care institutions globally have responded to the unforeseen situation created by the Coronavirus effectively and efficiently within the limitations of the existing healthcare setup and the laid down procedures. This pandemic has forced all of us in general and policymakers to analyze the nature and consequences of the pandemic. This is neither the first nor the last pandemic in human history, though severities may vary. The threats posed by pandemic diseases have become more dangerous in the previous decade. World Health Organisation has already cautioned about the threat levels of the pandemic disease Covid 19. In such circumstances, the healthcare systems, with their workforce, are expected to play a leading role in managing emerging crises. Respiratory diseases have assumed the role of pandemics in preceding years, which have already tested the part of healthcare infrastructure and personnel beyond their capacities. Around the globe, we could see hospitals and other health care institutions flooded with Coronavirus patients. The Coronavirus is a novel that has created confusion and misunderstandings since its very origin. We have WHO deal with such health care issues with a 360-degree vision at the world level. This organization failed to give a lead in healthcare issues to the world.

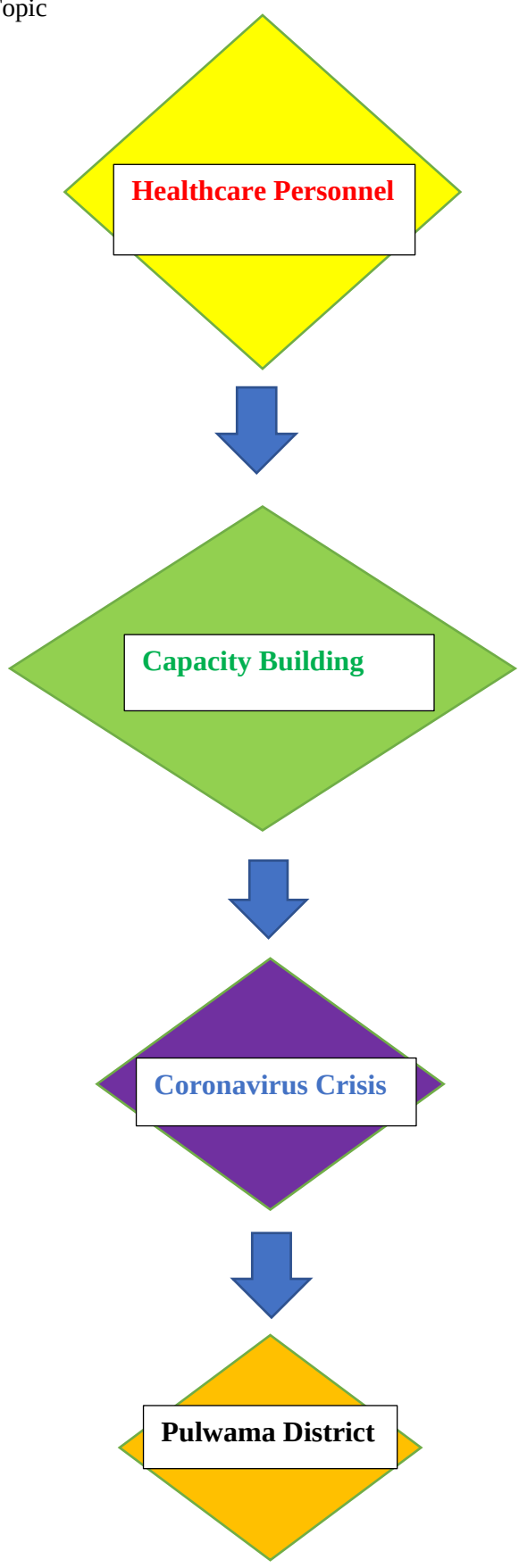
The role played was not statesmanlike. Whether it was the complexity regarding the nature or mode of transmission, WHO's conduct created more complexities than resolving them. The whole world setup trembled by the outbreak. Even the most powerful countries were caught napping before this invisible enemy. The undiplomatic statements by different world leaders regarding the outbreak showed confusion at the international level (Maria, Laura.2020). There was complete chaos in the global leadership. Every country worked its level best to manage the crisis within it. The global reaction to the outbreak of the Coronavirus has been disorganized. Most nations have retreated inward, widespread travel bans and export restrictions are in place, and international organizations like the World Health Organization are being marginalized as the United States suspends its funding commitments. One notable aspect

of the response to the Coronavirus epidemic has been the deterioration of the multilateral institutions of global governance. Different international leaders vociferously advocated for their own countries regarding vaccine availability, known as "vaccine nationalism," mostly resorted to by wealthy nations like Britain, France, Germany, and the US to negotiate prior-purchase agreements with COVID-19 vaccine manufacturing companies before the conclusion of the final regulatory approval by the authorities. There were concerns that in a world of approximately 8 billion people, such prior contracts would make the initial round of vaccinations expensive and only available to wealthier nations.

The health outcome, measured from cured cases, recurrence of cases, etc., depends on the quality of services supplied to the patients. The healthcare system involves the inputs of human resources, equipment, material, and intermediary services (Park, K.2017). During the outbreak of COVID-19, the healthcare system was the leading player in disease management. District Pulwama was also the victim of this disease. Our research focuses on the capacity building of healthcare personnel in Coronavirus crises. This research is undertaken in District Pulwama, one of the districts of the union territory of Jammu and Kashmir. The research topic is presented diagrammatically in Figure 1.1

Fig. 1.1 Focus of the Research Topic

Source: The author designed



This research topic focuses on the capacity building of healthcare personnel regarding Coronavirus in District Pulwama. Capacity building includes the training, skillsets, and other behavioural skills which enable healthcare personnel to carry out their job. Healthcare personnel consists of doctors, paramedical staff, and other associated workers. This research has been undertaken on the role played by healthcare workers during COVID-19. How have healthcare personnel been trained, and what are the loopholes in their capacity-building measures? This study has focused on the Pulwama district of Jammu and Kashmir.

The researcher could see a policy of blowing hot and cold simultaneously in India. Since the pandemic began to raise its ugly head, the elimination of separate hospitals, testing and lack of infrastructure, and scarcity of qualified healthcare personnel were the country's vital issues. There were many complaints from doctors and other paramedical staff regarding the scarcity of proper gear or PPE kits. On January 30, 2020, the Coronavirus began to spread throughout India. Because local manufacturers could not produce PPE kits in larger quantities, they were largely dependent on imports. The dramatically rising caseload caused a PPE kit scarcity in India. The absence of inter-department coordination among various government departments and other agencies was also an impediment in managing the circumstances caused by this outbreak. The same situation could be witnessed in District Pulwama (J&K). The administration was caught unawares. District administration, as in other districts, resorted to lockdown, testing, contact tracing, and quarantine provisions. Initially, there was a complete breakdown of the regular governance, but with the passage of time and the availability of resources, it began gradually resorting to regular governance activities.

The level of capacities that have been imbibed to healthcare personnel is reflected in how the service deliveries or handling emergencies during the pandemic occur. The outbreak of COVID-19 and the resultant management by default approach by the leaders of the Public healthcare sector has made us study and analyze the preparedness of the human component of healthcare systems. The personnel working in public healthcare institutions are the leading players in the whole scenario.

Socio-economic profile of Jammu and Kashmir

Jammu and Kashmir is a region of India with a unique and vibrant cultural character. Jammu and Kashmir, one of the most important territories of the Indian Union, has a total area of 2,22,236 sq. km. Pakistan illegally occupies 78,114 sq. km, 5,180 sq. km are transferred to China by Pakistan, and China occupies 37,555 sq. km.
This area is spread between 320 17' and 360 58' North latitude and 730 26' to 80 30' East longitude. It covers 640 kilometers from North to South and 480 km from East to West. It is located in the northwestern part of India and is strategically bordered by Russia, China, and Pakistan. On the south, it shares a border with Himachal Pradesh and Punjab; on the southwest and west, with Pakistan; on the north, with Chinese Turkistan and a small piece of Russian Turkistan; and on the east, with Chinese Tibet. Before Reorganisation (bifurcation and abolition of statehood), Jammu, Kashmir, and Ladakh made up the three primary natural regions that makeup Jammu and Kashmir. For administrative purposes, the state was split into two main divisions, Jammu and Kashmir, each of which included ten districts (including two in the currently full-fledged Union Territory of Ladakh region, after Reorganisation).

Four geographic zones make up the Jammu and Kashmir UT. First is the well-known Kandi belt, which refers to the rugged and semi-mountainous plain. The second are hills like the Siwalik ranges, and the third are mountains like the Pir Panjal range and Kashmir valley range. The Tibetan region of Ladakh and Kargil is the fourth. There are 6671 settlements, 285 blocks, and 20 districts. 124 people per square kilometer are found in the UT (The national average is 382). The UT's decadal growth rate is 23.64%, compared to the national average of 17.64%, and the region's population is still expanding far more quickly.

There are several reasons why the region of Jammu and Kashmir only developed slowly. A significant contributing aspect has been Kashmir's environment of armed militancy during the past ten years. The low productivity in the agricultural sector and related industries has made it difficult to create jobs and earn money. The industrial sector is still in its infancy due to a lack of investment opportunities and weak industrial infrastructure. There has not been an excellent plan to help the potential industries experience more significant economic growth. The state's weak economic growth has also been caused by inadequate budgetary management and poor governance.

Presently the economy of Jammu and Kashmir is on a path of progress. Primarily relying on agriculture and related industries, various initiatives are in vogue to increase the developmental process. Sericulture and cold-water fishing are other well-known industries in the Kashmir valley. Kashmiri wood makes premium cricket bats, also known as Kashmir Willow. Kashmiri saffron is renowned and contributes significantly to the region's foreign exchange earnings. The agricultural items exported from Jammu and Kashmir include apples, sorghum, cherries, corn, millet, oranges, rice, barley, peaches, pears, saffron, vegetables, and wheat. Examples of manufactured commodities include handicrafts, shawls, and rugs. The growth of the state's economy depends heavily on horticulture. The second-largest source of income for the area lies in this sector. Kashmir, renowned for its horticultural industry, is the state's wealthiest area. Apples, plums, apricots, pears, cherries, walnuts, and almonds are some of the agricultural items produced in the state.

The Kashmiri economy depended heavily on tourism before the violence started in 1989. The Kashmir valley's tourism industry was hardest damaged. However, Jammu's sacred sites and Ladakh's Buddhist monasteries are still well-liked destinations for tourists and pilgrims. The state's economy has been significantly impacted by the tens of thousands of pilgrims that visit the Amarnath and Vaishnav Devi sacred sites each year. The Vaishnav Devi yatra alone brings a huge each year to the area's economy. With the return of normalcy, the footfall of tourists is increasing rapidly.

Healthcare indicators of Jammu & Kashmir

Health Care Services in the Union Territory of Jammu and Kashmir are crucial for developing human resources and rebuilding public confidence in governance structures. The main goal of these services is to provide essential, mid, and ancillary-level preventive, curative, and restorative health care services. The outdated health care system left over from independence has undergone significant adjustments to create a state-wide network of advanced health delivery systems. In terms of delivering healthcare services to the populace, the Jammu and Kashmir State have done reasonably well, yet the level is still below satisfaction.

The UT has a total rate of fertility of 2.3 while 22 is the infant mortality rate. The UT's gender ratio is 889. (compared to 940 for the country). The following are comparisons of significant demographic and health indicators of Jammu And Kashmir:

Table 1.1: Demographic and Health profile of Jammu & Kashmir UT as compared to All India level

S. No.	Item	J&K	India
1	Total population (Census 2011)	12541302	1210193342
2	Decadal Growth (Census 2011) (%)	23.64	17.64
3	Crude Birth Rate (DOS 2019)	15.4	20
4	Crude Death Rate (DOS 2019)	4.9	6.2
5	Total Fertility Rate (DOS 2019)	1.4	2.2
6	Infant Mortality Rate (DOS 2019)	22	32
7	Maternal Mortality Ratio (DOS 2019)	NA	167
8	Sex Ratio (Census 2011)	889	940
9	Population below the Poverty line (%)	10.4	22
10	Schedule Caste population percentage (DOS 2019)	7.38	16.2
11	Schedule Tribe population percentage (DOS 2019)	11.91	8.2
12	Female Literacy Rate (Census 2011) (%)	56.43	65.5

Source: Department of Health, J&K

Table 1.2: Health Infrastructure of Jammu & Kashmir

Particulars	**Required**	**In position**	**Shortfall**
Primary Health Centre	271	375	-
Sub-centre	1666	1907	-
Community Health Centre	67	85	-
Multipurpose worker (Female)	2282	1794	488
Health Assistant (Female)	375	27	348
Health Assistant (Male)	375	89	286
Obstetricians & Gynaecologists	85	28	57
Physicians	85	44	41

Paediatricians	85	17	68
Total specialists	340	135	205
Radiographers	85	59	26
Pharmacist	460	557	-
Health Worker (Male)	1907	-	-
Laboratory Technicians	460	396	64
Nurse/Midwife	970	403	567
Doctor at PHCs	375	451	-

Source: Department of Health, J&K 2021

The National Health Mission now includes the nation's rural and urban areas after combining the National Rural Health Mission with the National Urban Health Mission. There are set norms for establishing Public healthcare facilities under National Health Mission. Concerning Jammu and Kashmir, there have been modifications because of geographical reasons. As per the NHM norms, a sub-centre is established where the catchment population in a plain area is 5000, or 3000 in the case of Hilly or tribal inhabited areas. Nevertheless, the norms for this region have been relaxed by keeping the provision of setting up sub-centres anywhere where the population under its catchment area is about 4000. Similarly, concerning Public Health Centres and Community Health Centres, there is a relaxation in the guidelines.

Table 1.3 NHM norms for establishing healthcare facilities.

Health Institution	**Population Norm (GOI)**		**Norms considered for J&K**
	Plain area	**Hilly/Tribal area**	
Sub-Centre	5,000	3,000	4,000
PHC	30,000	20,000	25,000
CHC	1,20,000	80,000	1,00,000

Source: NHM Jammu And Kashmir

Socio-Economic Profile of Pulwama (J&K)

Pulwama, a part of the gorgeous Kashmir valley, is bordered by Anantnag Districts in the south and east, Budgam and Poonch Districts in the west, and Srinagar Districts in the north. Tehsils Pulwama, Shopian, and Tral of District Anantnag were divided to create the district in 1979. The district has a total area of 1090 square Kilometres. According to the 2011 census, the district has 331 villages in total, including eight that are abandoned.

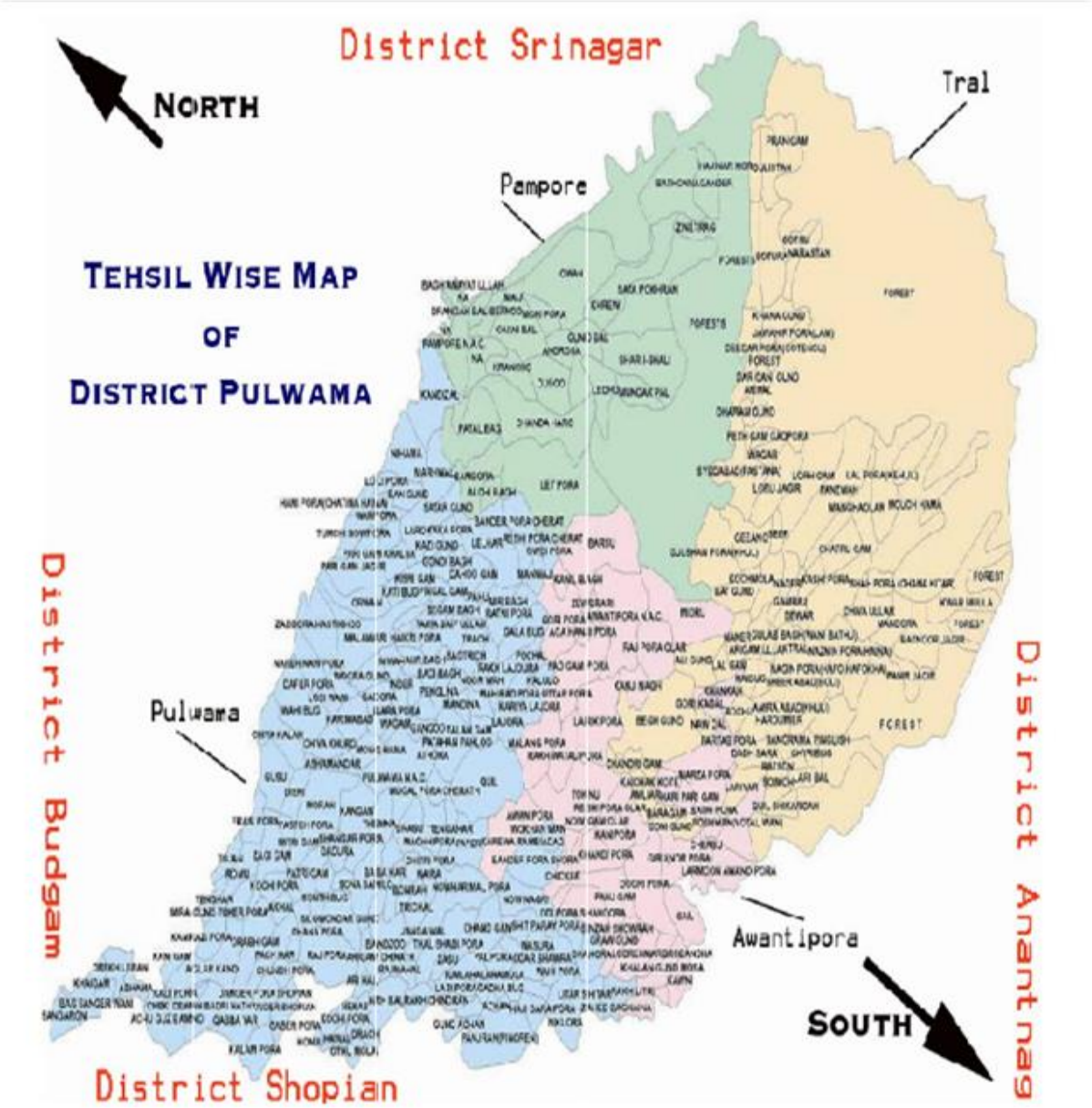


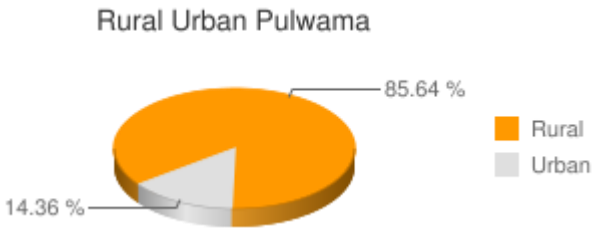
Figure 1.2.Map of Pulwama District

Source: Director Health Services Kashmir, 2021

For development purposes, the district is divided into eleven community blocks: Tral, Aripal, Dadsara, Awantipora, Pampore, Kakapora, Pulwama, Shadimarg, Achgoze, Lassipora, and Newa. The eight Tehsils in the district are Pulwama, Pampore, Awantipora, Aripal, Rajpora, Kakapora, Shahoora Litter, and Tral. The administrative hub of the district is located in Pulwama, which is 31 kilometers south of Srinagar. Due to its comfortable environment, abundant springs, waterways, waterfalls, blossoms, delectable fruits, and other scenic beauty, the district is regarded as one of the most beautiful places on Earth. Additionally, District Pulwama is well-known worldwide for its saffron farming, primarily done on Karewa lands in Pulwama, Kakapora, and Pampore. Fruit cultivation is another prominent industry in the region. Saffron cultivation in the district has earned Tehsil Pampore notoriety all over the country. The Kashmiri "Crocus-Sativus" saffron is prized for its aroma and is in high demand in Hinduism as a condiment and a dye for forehead tattoos. The district needs organized efforts for its swift, integrated, and balanced development because it is fiscally and educationally underdeveloped. The literacy rate in the census of 2011 was barely 65%, with only 53.81% of women being literate.

People's primary occupation is agriculture. 30% of people are working on other things while the remaining 70% are involved in this activity. The majority of the population is Rural. Only 14.36% are urban, while the remaining significant chunk belongs to rural society.

Figure 1.3 Rural and Urban Population in Pulwama



Source: Director of Health Services Kashmir

Agriculture, followed by fruit production, provides the district's residents with most of their income. Nevertheless, the industrial sector is also growing. The numerous Small Scale Industrial Units that have popped up around the district and are registered with the District Industries Centre in Pulwama employ thousands of people. In several locations throughout the

district, industrial estates are being built. The district's most well-known industrial complex is Lassipora. The district is also abundant in minerals, but mainly limestone is mined to make cement in Zainatrag and other nearby Khrew and Pampore communities. The Geology and Mining department is undertaking surveys to take advantage of the potential for more minerals in the area. The district has 1083.25 square kilometers of forested land, including 273.25 square kilometers of wildland. A significant portion of the State's economy comes from timber production. DEODAR, KAIL, and FUR are the main commercial species grown in these forests. Additionally, there are accessible herbal products. The state's forests are referred to as its "GREEN GOLD" since they not only supply wood for building purposes but also fuel and protection for wildlife.

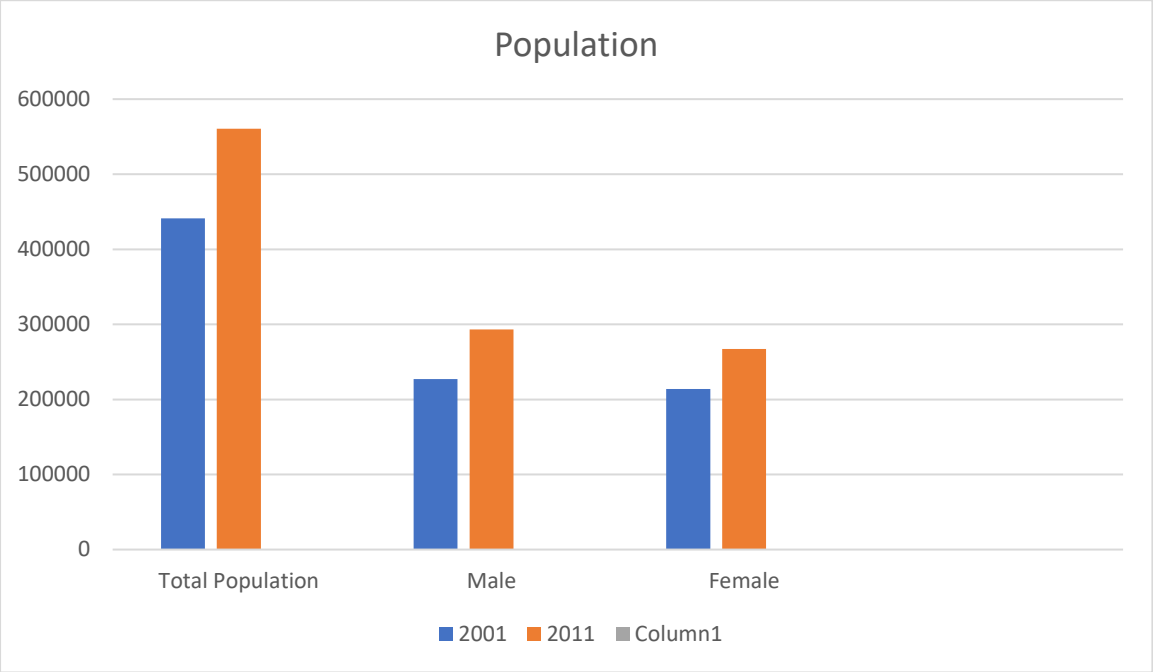
A total of 560 440 people inhabited Pulwama in 2011, with 293,064 men and 267,376 women. At the time of the 2001 census, Pulwama had a total population of 441,275, of whom 227,188 were men and 214,087 were women. Various demographic parameters of the District Pulwama are as under;

Table 1.4 Demographic Parameters of District Pulwama (Census 2011 and 2001)

Description	2011	2001
Population	5.60 Lakhs	4.41 Lakhs
Total Population	560,440	441,275
Male	293,064	227,188
Female	267,376	214,087
Population Growth	27.00%	26.39%
Area Sq. Km	1,086	1,086
Density/km2	516	465
The proportion of the Jammu and Kashmir Population	4.47 Percent	4.35 Percent
Sex Ratio	912	942
Child Sex Ratio (0-6 years)	829	829
Average Literacy	293958	NA
Male	178326	NA
Female	115632	NA
Total Child Population (0-6 years)	97,374	97,374
Literates	293,958	NA
Male Population (0-6 years)	53,234	53,234
Female Population (0-6 years)	44,140	44,140
Male Literacy	74.36	63.54
Female Literacy	51.80	39.31
Child Proportion (0-6 years)	17.37 Percent	22.07 Percent
Boys Proportion (0-6 years)	18.16 Percent	23.43 Percent
Girls Proportion (0-6 years)	16.51 Percent	20.62 Percent

Population increase in the district is displayed in Figure 1.4 as follows

Fig.1.4.Population of Pulwama District



Source: Director of Health Services Kashmir

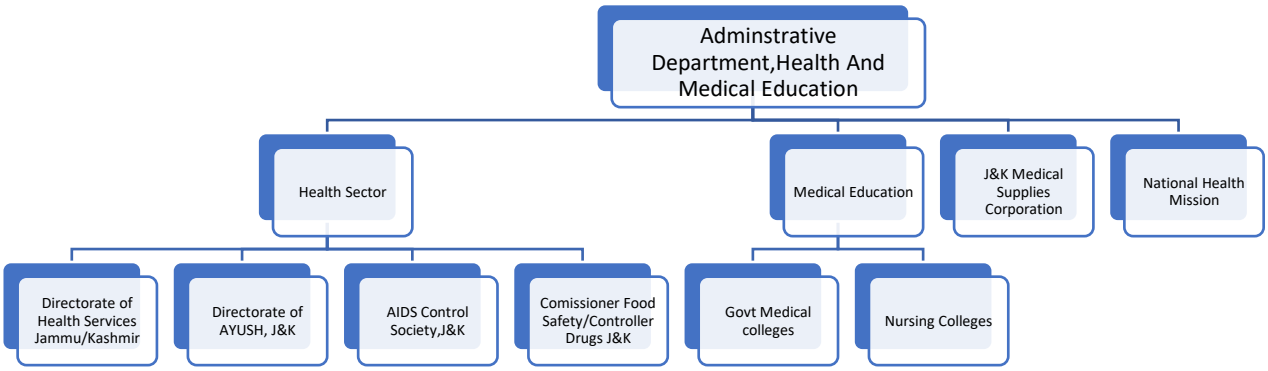
The organizational structure of the health department

Jammu and Kashmir

At the Union Territory level, the health administration is supervised by the health minister, who happens to be the political head of the department. During President's rule, the department is taken care of by an Additional Chief Secretary level officer. The department is administered at the UT level by a career bureaucrat who holds the rank of Commissioner Secretary of Health and Medical Education. There are various organs of the health department. Health Wing deals with the General supervision of the Directorates of Kashmir and Jammu. AYUSH, AIDS control, commissioner Food Control, and Controller of drugs are supervised by the Health Sector wing. The Medical Education wing supervises Government Medical Colleges and Nursing Homes. There is a Medical Supplies Corporation headed by the Managing Director, who reports to the Secretary. The National Health Mission wing, headed by Managing Director,

also works separately under the supervision of the health department. Generalist Deputy secretaries and joint secretaries advise and assist the commissioner secretary.

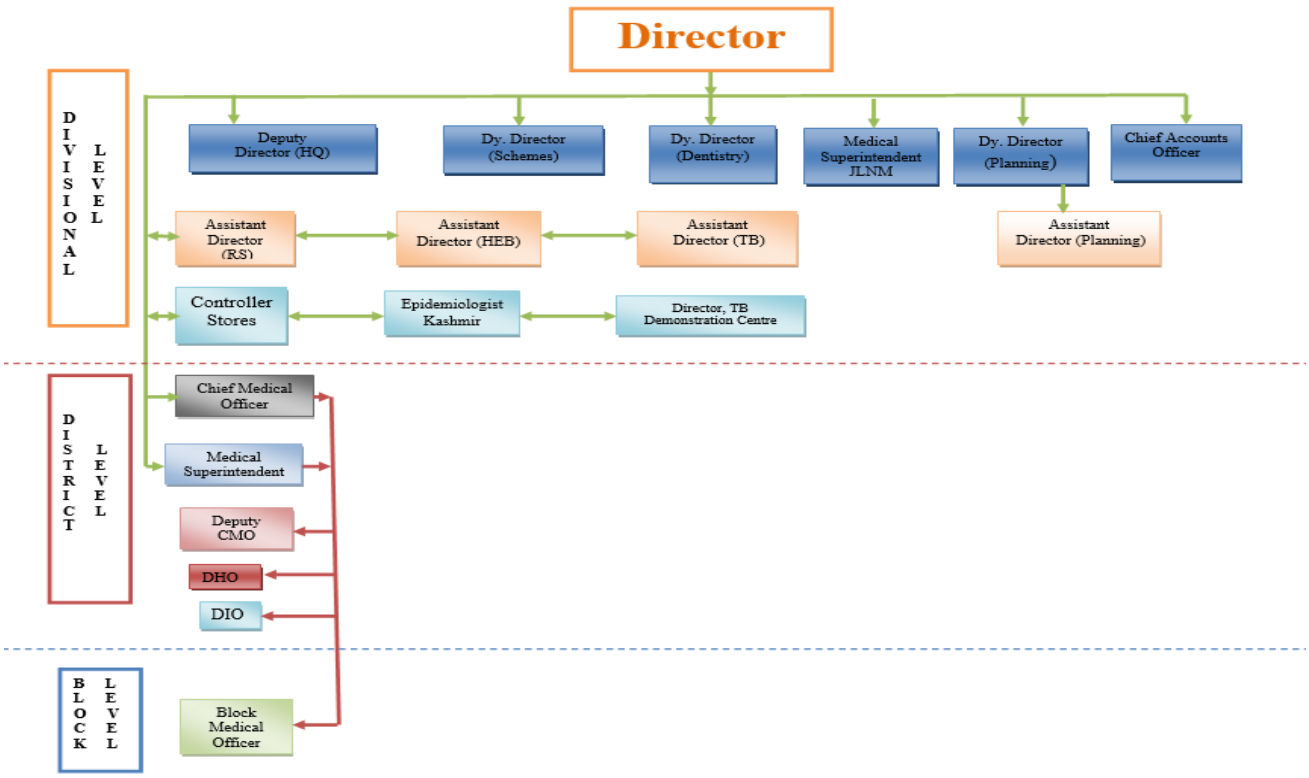
Figure 1.5 Organisational Structure of Health Department in Jammu and Kashmir



Source: Jammu and Kashmir Health Department

The whole healthcare setup has been bifurcated into two divisions, as there are two administrative divisions: Jammu and Kashmir. Each division is headed by the director of health services, who happens to be a specialist (Tabish, S.A. 2010). The director supervises different Deputy directors who hold charge of different sections. Chief Medical Officers report to the Director of Health directly, while Block Medical Officers report to Chief Medical Officer. There is a well-established hierarchy. The below-mentioned organogram Figure 1.6 illustrates it.

Figure 1.6 Organogram of the health department at the Divisional Level

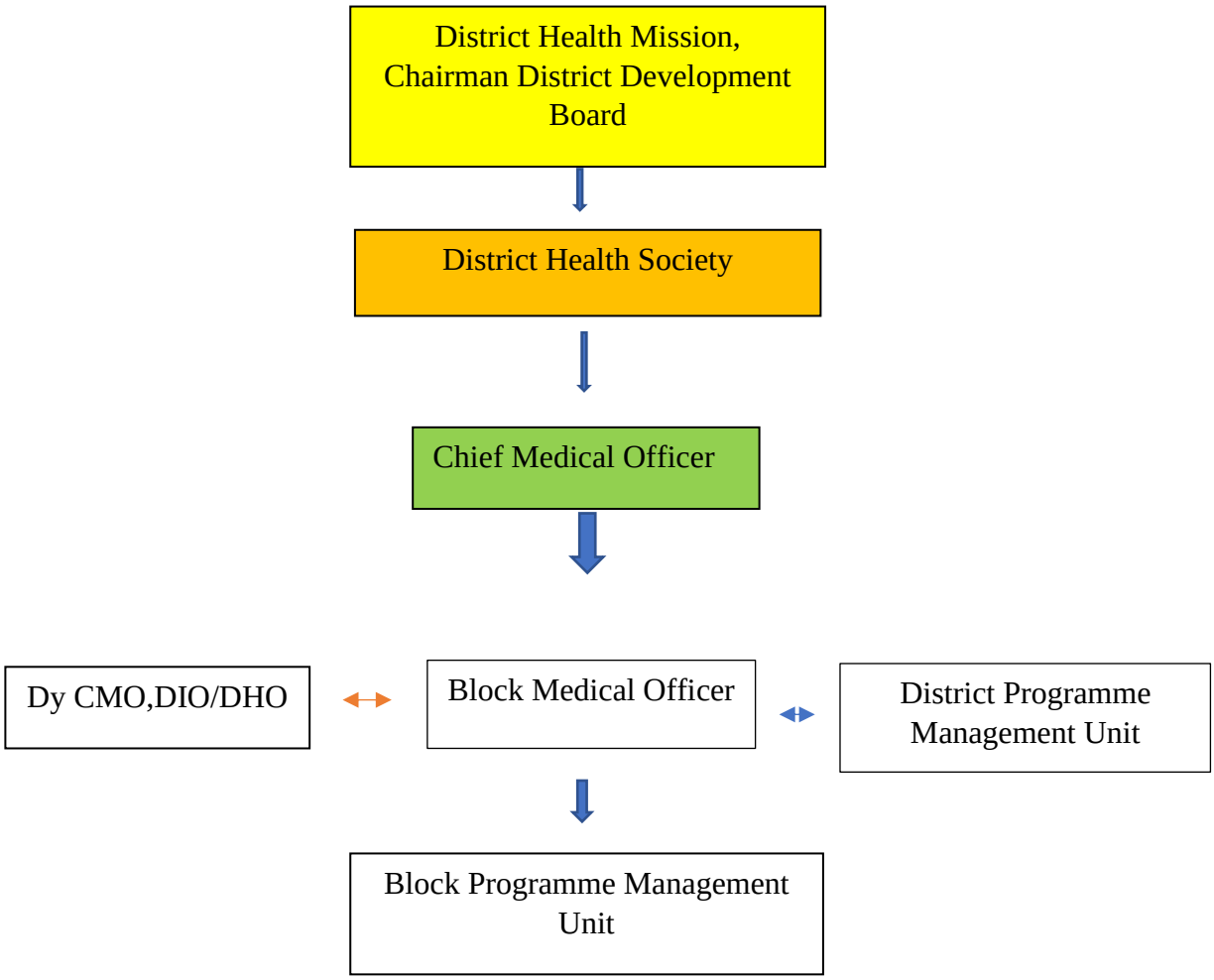


Source; Director Health Services Kashmir, 2021

The Organisational Structure of the Health Department at the District Level

Under National Health Mission, a well-established healthcare administration structure is at the district level. Under the supervision of the chairman of the District Development Board, the Deputy commissioner looks over the District health society, which consists of all district-level officials belonging to various wings of the health department.

Figure 1.7 Administrative structure of District Health Administration



Source: JKNHM

At the district level, under single-line administration, District Development Commissioner Pulwama oversees the general health administration in the district. The Chief Medical Officer, whom the deputy chief medical officer assists, has technical supervision over the department within the district. There are district health officers and district immunization officers at the district level. Medical Superintendents, head district hospitals, and sub-district hospitals. There is a well-functioning Tuberculosis Centre located at Keller. Its superintendent reports to the Chief Medical Officer Pulwama. The district has been divided into four Community health blocks, Pulwama, Tral, Rajpora, and Pampore. The Block Medical Officer heads each block. They have dual, general, and technical supervisory functions over the health institutions within

their territorial jurisdiction. There are 194 public healthcare institutions in the district. Block-wise levels of these facilities have been shown in Table 1.5.

Table 1.5 Block-Wise Health Institutions

S.No.	Category of Institution	Total	Block Wise Breakup		
			Pulwama	Tral	Pampore
1.	District Hospital	01	01	00	00
2.	Sub District Hospital	02	0	01	01
3.	Community Health Centre	01	01	00	00
4.	Tuberculosis Clinic	01	01	00	00
5.	Public Health Centre	19	09	02	08
6.	Public Health Centre (New Type)	29	12	08	09
7.	Sub-Center(All)	96	35	36	25
Total		**149**	**59**	**47**	**43**

Source: Director Health Services Kashmir,2021

The number of doctors and other paramedical staff working within the district is shown in Table 1.6. The Health wing and the Family Welfare wing of the department provide human resources to the district's public health institutions.

Table 1.6 Human Resources in the Health Section of Pulwama.

S.No:	Category of post	Sanctioned	In-Position	Vacant
Gazetted:				
1-	Senior Consultant	02	01	01
2-	Consultant	38	34	04
3-	Medical Officer	131	115	16
4-	Dental Surgeon	27	25	02
5-	Administrative Posts	08	07	01
Total		206	183	23

Non-Gazetted				
1-	Paramedical / Other Staff	513	432	95
2-	Class-IV	254	222	32
Total:		767	654	127

Source: Director Health Services Kashmir,2021

The human resources available with the Family Welfare section in Pulwama are depicted in Table 1.7

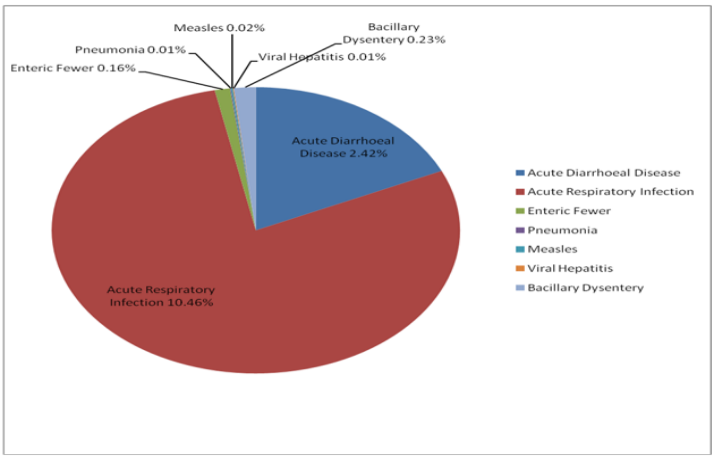
Table 1.7 Family Welfare Section Pulwama

S.No:	Category of post	Sanctioned	In-Position	Vacant
Gazetted:				
1-	Senior Consultant	0	0	0
2-	Consultant	0	0	0
3-	Medical Officer	03	0	03
4-	Dental Surgeon	0	0	0
5-	Administrative Posts	02	02	0
Total:		05	02	03
Non-Gazetted:				
1-	Paramedical / Other Staff	103	83	20
2-	Class-IV	05	0	05
Total:		108	83	25

Source: Director Health Services Kashmir,2021

Concerning the healthcare condition in the district, various communicable diseases outbreak data for the year 2016-17 was provided, where it could be inferred that respiratory fever formed a significant chunk of communicable diseases in the district. Figure 1.6 displays the proportion of various communicable diseases in the district.

Figure 1.6 Graphic representation of Communicable diseases in District Pulwama for the year 2016-17



Source: Director Health Services Kashmir, 2021

Capacity building Parameters of healthcare workers in Pulwama

Ministry of Health and Family Welfare, Government of India creates and produces training and reference materials for all concerned cadres. It Provides funding to States and UTs so they can publish training materials. Health Department at the UT level trains master trainers that are made available to train Divisional and district level, and other education authorities. Health staff at the district and block levels should get orientation which leads to the right translation and adaptation of training materials. Department of Health And Family Welfare at the District Level provides training to ASHA, ANM and other Contingent Paid workers. Building capacity is crucial for the healthcare industry because it improves the decisiveness and productivity of healthcare professionals and the overall health system. Training is only one component of capacity building, which also includes the following; giving people the knowledge, abilities, and access to resources they need to do their jobs well, creation of management structures, processes, and procedures that govern interactions between various departments and sections as well as within individual organization, establishing new legal and regulatory frameworks that allow companies, organizations, and entities at different levels and across different sectors to improve their resilience. Therefore, it is crucial for frontline workers and medical experts to stay informed about new procedures and processes. A key aspect of capacity building is fostering reformation inside the healthcare system over time. This transformation goes beyond task completion to change mindsets and attitudes.

Furthermore, information technology and cutting-edge innovations like artificial intelligence, neural engineering, and machine learning are changing the face of healthcare at an unprecedented rate. The nature and scope of diseases are also changing at a rapid pace. Healthcare workers need to be in sync with the latest trends in diseases.

As per the information provided by the Chief Medical Officer of the district, after the outbreak of the disease, Pulwama has more than 1200 healthcare workers in the district, comprising 200 doctors and more than 900 para-medical staff. ASHA workers and Anganwari helpers augment the healthcare system in the district. Training and capacity building are essential components of retaining the skills and knowledge necessary to efficiently fulfil the job's requirements. The health department's quality enhancement section conducts various training, workshops, and courses to develop capacities and foster sustainable quality culture. Hospital administrators, quality managers, matrons and nursing superintendents, health administrators, hospital managers, and nodal officers for assurance of quality standards in public health departments are among the health professionals it targets. The outcomes of service quality represent the abilities of healthcare professionals. By personifying a system's essential ideals, health service professionals treat and care for individuals, lessen their pain and suffering, prevent sickness, and minimize its effects. Knowledge and health activity are connected via the human resource link. (The World Health Report, 2006, Working Together for Health.) In District Pulwama, the health department undertakes issue-based short-term training for different employees working in the health department. There is a regular provision for conducting in-service refresher programs for healthcare personnel. Skill enhancement initiatives for health department staff are undertaken at District, Divisional, and Union Territory levels. After the outbreak of COVID-19, the Epidemiology division of the Directorate of Health Services formulated various training programs. These included Testing modalities, Diagnostic Modules, Post COVID-19 Syndrome, and MCH Care during COVID-19.

Scope of the study

The scope of this research lies in studying and analyzing the human resource component of health care and drawing the relationship between the delivery of services and the capacity of health care personnel during the pandemic period. There is a need to lay down and modify policies necessary for the proper functioning of any organization with changing circumstances. COVID-19, like pandemic diseases, needs a well-formulated policy guideline to tackle it properly. Also, the general health care policies need a fresh relook to reflect the new changes. According to the systems theory perspective, open social systems cannot exist without interacting with their surroundings. Some of the most vital resources that organizations rely on from their surroundings include the public who invest, Customers who use the products or services, suppliers who offer the supplies, workers who donate their time, and employers that provide labour or management (Katz& Kahn,1966). As per the Systems theory of Public Administration, an Organisation has to work in synchronization with the environment, take inputs, and provide outputs. Organizations that function in dynamic environments need to be open systems to maintain equilibrium. Dynamic environments produce a lot of information about what an organization needs to do to endure and develop because they are constantly changing. Information is the key to overcoming uncertainty. An open organization keeps an eye on its surroundings and gathers data on circumstantial variations classified as input. Presently the healthcare administration needs to be modeled on the requirements of current times. We cannot tackle present problems with previously held policies or initiatives. National Health Policy, 2017, focuses on educating, clarifying, strengthening, and putting emphasis on the government's involvement in enhancing health systems in all of their aspects, encompassing cross-sectoral efforts, access to technologies, human resource development, the organization of healthcare services, the management of sickness, the promotion of good health, the creation of adequate financial protection measures, the reinforcement of regulations, and health assurance.

The resources available to healthcare facilities in India range widely and are determined by the possession of resources. On one extreme, we have the best facilities, services, and practitioners in prominent private and public settings, typically in major cities. Rural healthcare facilities, on the other hand, are at the other extreme, barely meeting the requirements for a healthcare facility due to their lack of infrastructure. Unfortunately, most citizens of low- and middle-income nations, including India, rely on the latter for their healthcare needs. Capacity building

in this sector could bring a significant transformation in the overall healthcare setup of the country.

Similarly, the health sector working within the society has to take feedback from it and reflect through various modifications aimed at improving quality service delivery. This study intends to explore the issues of skills and training provided to health care professionals to meet the sudden outbreak of communicable diseases and suggests possible alternative policy measures. The research could potentially trigger further studies in comparative health administration and trans and cross-national disparities in health administration principles in theory and practice.

Need of this research.

The research is novel in health administration as it analyzed the healthcare system's preparations in light of the COVID-19 crisis, which is novel in itself. The study is of incredible benefit to avoiding mismanagement at healthcare institutions during COVID-19 pandemic-like situations. The research topic addresses the health care issues faced due to the outbreak of the disease. As this topic analyzes the capacity-building measures of healthcare personnel in handling pandemics, it would be of immense benefit for healthcare institutions, policymakers, and other stakeholders to take remedial measures in formulation, modification of the policies, and other standard operating procedures in this sector in the future. It would enhance the quality-of-service delivery of the health care institutions. Whether in the governmental or private sector, changes in policy relating to pandemics would benefit society by making the healthcare system more efficient and dynamic. It would enhance the knowledge of conceptual and operational issues relating to health, capacity building, pandemic crises, human management in particular, and public administration as a whole in general.

Major outcomes of this research include:

1. Help the policymakers modify healthcare policies in sync with the realities existing on the ground.

2. Enrich the discipline of public administration in general and public health administration and human resource management in particular.

3. Developing a knowledge repository of health administration of a specific region and triggering further studies for cross-cultural studies.

Chapter 2

REVIEW OF LITERATURE

Building capacity enhances knowledge, skills, processes, and resources to help organisations and communities survive, adapt, and thrive in a fast-changing world. The internal change created and sustained over time, the transformation of this kind extends beyond completing tasks to changing mindsets and attitudes, is a crucial component of capacity building (UN,2022). Elton Mayo,1928 highlighted that studying human beings in an organization is as important as studying the structure, work methods, and human relationships. The healthcare workers form the base of the healthcare setup. The research studies identified in the present research have been analyzed in this chapter. According to the goals of the study, this chapter has been divided into five sections. The first part deals with the studies dealing with the capacity building of healthcare personnel at the international level. The second part deals with studies at the national level, and the subsequent parts deal with studies at State/U.T. levels and district levels and capacity building in public and private healthcare sectors.

2.1 Studies on the global scenario of capacity building of healthcare workers to meet pandemic-like situations.

The possibility of a pandemic revival persists until the new coronavirus strains are controlled globally, making pandemic planning and response crucial "global public goods." The Healthcare industry is facing tremendous pressure from the ever-increasing burden of non-communicable and communicable diseases. There are many global challenges for health administration. Maintaining the effectiveness of the healthcare system amid limited resources is one of the significant issues. (Lawrence,2003).COVID-19 has left the world perplexed, where little could be done to stop it. Revenues of governments have decreased due to the breakdown of regular businesses. In such conditions, continuing effective service delivery without compromising the quality during financial constraints becomes impossible. These

circumstances demand that a plan should be in vogue to meet exigencies. A policy must be framed to direct available resources to the priority-based critical areas to maintain efficiency. During pandemics like the COVID pandemic, health administrators must define the scope of the current situation and have a realistic analysis. Leaders must make plans which should prioritize various activities on the basis of a well-researched analysis. They should put forth a working plan for achieving the set goals (Keen. et al., 2020). Among the organs of governance, health care systems have been affected worst due to outbreaks of various pandemics (Fridell et al.,2020).

Knowledge, skills and behaviour of healthcare workers have a profound effect on the manner of service delivery in healthcare institutions(Armando et al., 2021). In many countries, it has been found that these countries' healthcare systems could not effectively cope with emerging situations. The system was on the brink of collapse. Developed countries were no exception to the mess that prevailed because of the virus's newness and lethal, mutating tendencies. The resilient tendency of the healthcare system makes it withstand different tragic situations. A healthcare system's resilience refers to the system's capacity to perform quality operations, even in the harshest times. The system's resilience is made up of many factors, where the capacity building of the personnel assumes a leading role. According to the WHO's SARS-CoV-2 infection surveillance procedure, those who have intimate contact with sick patients are most at a higher risk of catching the virus. This makes the healthcare workers most vulnerable. Improving the working conditions like sanitation and equipping the healthcare workers with necessary equipment would enhance the resilient tendency of the system.

Proper safety measures and the dissemination of requisite information help minimize the risks. Personal Protective Equipment (PPE) and rigorous infection control procedures are required regardless of the workplace environment. It was found that the participants who had regularly used safety gear were less prone to contracting an infection (Alajmi et al., 2020). Whether any patient or co-worker is infected, there is a need to maintain higher degrees of preventive measures within the workplace. It should not be a consideration that a specific place is infection free. Healthcare workers need to treat every place as a potential site of contamination. These preventive measures must be implemented considering essential healthcare delivery continuity. Healthcare institutions should restrict their everyday functioning to an optimum level in crises. Complicated surgeries need to be postponed until the pandemic is over. In regular surgeries, highly trained and motivated staff must carry on pre- and post-operation procedures within a

healthcare institution(Gupta et al., 2020). The overall system of healthcare should not be hit. Restrictions need to be selective, and access to emergency services should never be barred. Special attention needs to be given to cancer patients, blood donation, HIV, and the diagnosis of TB during pandemic situations (Abdela et al., 2020). People with life-threatening diseases need constant healthcare support. Even in emergencies, their support system should not get derailed.

As healthcare workers are under tremendous pressure, increased support and appreciation from management and family decrease the stress and burnout of healthcare workers (Afulani et al., 2020). Constant support from superiors enhances the confidence of healthcare workers.

The COVID-19 outbreak has had a substantial emotional impact on front-line healthcare professionals. It was found that they were suffering from low sleep quality, which resulted from stress and work overload (Yin et al., 2020). Also, Healthcare workers are suffering from stress levels not only from exhaustion but because of making painful and ethical decisions while managing COVID-infected patients (Inez Miyamoto,2020). Capacity-building initiatives comprising fun and other confidence enhancement could help to cope with psychological stresses during trying times. The healthcare worker defines the quality of services by utilizing the skills he has imbibed. The system of healthcare could become more and more resilient only when healthcare personnel are ready to fight the battle without any fear

We could gauge the efficacy or worthiness of the healthcare system by analyzing the quality of services provided to the patients. There are various models for measuring the quality of Health Services. The Donabedian model is a conceptual framework for analyzing healthcare services and assessing the standard of treatment provided by healthcare workers. This paradigm states that three categories—structure, process, and outcomes—can be used to determine the quality of treatment. The structure consists of dependable elements like ownership, tangible assets, staff, etc. Concerns between patients and healthcare professionals are referred to as the process. Focus is placed on the outcome.

Government ownership and structural factors like teaching and research involvement can enhance the perception of trustworthiness and the hospital's reputation. (Basavanthappa BT, 2015). For COVID times, it could also be a valuable tool to learn about resilience and dynamicity by analyzing structures, processes, and outcomes.

Process aspects and standardization can influence how treatments are perceived and establish behaviour patterns that patients and hospital staff can count on when it comes to clinical care.

Interpersonal interactions might reveal a staff member's preparedness and availability to address patients' communication and emotional requirements (Basavanthappa BT, 2015). The clinical result of hospitalization constitutes the outcome component. It comprises better, cured, alleviated (pain or symptom relief for treatable but not curable illnesses), and (aggravation of symptoms or illness). We also need to investigate the potential impact of the clinical outcome on the patient's sense of service quality and satisfaction (Basher Shabeer P, Khan S, 2012).

To better pandemic response by all segments of the population, including healthcare personnel, research on the gendered aspects of the COVID-19 pandemic is required. Female healthcare workers need a safe and secure environment in the workplace. Specific places need to be earmarked for their easement. Their special needs require to be considered while allotting various tasks to them. Policymakers must consider gender while framing health workers' schemes or programs (Fawaz, M et al.,2020).

Globally, the disease burden is shifting, and non-communicable diseases are already beginning to affect people in low- and middle-income nations. (Sheikh. & Nabeel,2020). No country is immune from the effects of disease spread. Different diseases may get originated in different countries, but issues arise when healthcare institutions fail to meet the public's expectations. With the advent of economic conditions, the nature of diseases is also changing. Despite so much focus on the health sector in many countries, the recent Coronavirus outbreak has proved that we cannot manage such pandemic diseases efficiently. Our systems of governance are not dynamic to absorb sudden shocks. Developing leadership skills for healthcare leaders is a common priority as the triple purpose of access, good quality, and affordability presents challenges to health administration (Sultana. et al.,2019). Effective healthcare leadership is recognized as an important requisite for the success of any health institution. There is a need to motivate healthcare workers to undergo standard procedures for their safety. (Puertas et al., 2022) studied the behaviour of nurses towards vaccination. The majority of respondents—77%—stated that they planned to obtain their COVID-19 immunization as soon as possible. Younger respondents (64% vs 85%, respectively) and fewer nurses (66%) and healthcare workers (62%) than doctors (85%) wished to get immunized as soon as possible.

Regarding various questions about attitudes and viewpoints, more nurses and other allied healthcare workers than doctors and younger participants than elder ones consistently exhibited vaccine reluctance. Governments are using the research's insights to establish measures to

increase Caribbean healthcare workers' trust and vaccination coverage while addressing their concerns with informational messaging. Also (Huang et al., 2021) in their study used an automated hand hygiene recording system to monitor HCW hand cleanliness at the entrance and exit of patient rooms throughout the COVID-19 pandemic. The connection was examined between COVID-19 epidemiological studies and hand hygiene compliance. The Healthcare Workers' hand hygiene rate increased when leaving a room during the first wave of COVID-19, increased by 13.73% during the after-lockdown period, and declined by 9.87% during the second pandemic wave, 2.82%. As opposed to this, hand hygiene decreased over time regardless of the pandemic's course or the care given to COVID-19 patients. The use of hand sanitizer when caring for patients and when leaving the room had a direct effect on the local transmission of COVID-19. In reaction to the risk propensity of the pandemic, HCWs modified their behaviour. Healthcare workers need to be vigilant regarding the safety measures regarding the spread of the disease.

Health administrators have a major role in directing hospital resources in response to the community's needs (Cory, Sarah. & Haron., 2019). They have the resources and the authority to provide necessary arrangements within the healthcare system. A resourceful, competent, and skilled administrator would properly know the whole system and play a pivotal role in efficient administration.

Training regarding the working of structures present within the system becomes vital for medical students. There is a suggestion of a four-point approach toward capacity-building measures. Top-down, bottom-up, partnership, and citizen-based. World over, there is a need to reform the training and skill programs for health administrators. Various reformative approaches may be used simultaneously or at different times. Such exercises should also strengthen community health services (Crisp, Swerissen & Duckett, 2000).

Capacity-building initiatives should be structured to include their overall organization rather than a specific section. To get positive results, it is imperative to go for the reform at an overall level. Capacity enhancement of a single section or group within the organization could be of little use unless and until all the constituents of the system get their skills enhanced (Grigsby, Westmoreland &Shiparski,2002). Capacity-building initiatives aimed at capacity job enlargement should disseminate information and skills from one level to another. This diffusion may be lower to higher or vice versa. Lower-rung officials with better technical skills could give a demonstration to higher-ups Roman Kislov et al.(2014)

A study of 476 medical staff members who worked in COVID-19 treatment facilities in specialized teaching hospitals in Northwest Ethiopia by (Chereka et al.2022) revealed that more than half of the participants were skilled at passing down their knowledge of COVID-19. Policymakers, the government, and other interested parties should emphasize expanding computer access, raising the education level of healthcare professionals, increasing their willingness to share COVID-19-related information, increasing their awareness of these issues, and enhancing their willingness to do so in order to encourage the practice of sharing COVID-19-related knowledge in this study setting.

While formulating these measures, the post level and the initiative's content should be considered. Capacity-building should be tailored group-wise and community-wise so that modifications and improvements can occur at each level of the organization to meet the specific requirements of each group. To build resilience within a healthcare organization, tailor-made capacity-building initiatives could yield positive results only where special attention is given to the various sub-groups within the institution, without affecting the overall coordination. Physicians need different skills, and nurses need different

(Hanan J Aboumatar et al.,2017) argue that enhancing the skill set of each sub-group results in an enhancement of overall organizational capacities. Targeted initiatives for each group within the organization provide better results regarding service deliverability with high standards.

Risks associated with COVID-19 continue to create a sense of insecurity among healthcare workers because of a lack of leadership. It was found that the heads or superiors often refused to provide a leadership role during the coronavirus outbreak period. It directly influenced the working of healthcare facilities(Dhahri et al., 2020). Colleges and other societies associated with medical education and healthcare need to develop local policies, practices, and guidelines in sync with the spirit of WHO guidelines to imbibe leadership skills among the budding stakeholders of this sector. Crises like this pandemic are advised not to be wasted. (Jeff Hwang et al., 2020). It allows us to conduct a formative analysis of the problems plaguing the nation's healthcare system. It forces us to re-evaluate our pre-existing ideas and organizational frameworks across many government sectors. Healthcare institutions should restrict their everyday functioning to an optimum level in crises.

In order to reduce the burden on the healthcare system and improve readiness for a pandemic-like event in the future, many scholars have argued for uniformly delivering good healthcare

at the community level. The healthcare sector's infrastructure and skill sets must be improved to achieve universal health coverage. (Basher and Haque, 2020). Local self-governance bodies could be roped in to share the ancillary duties with a healthcare worker. Policies need to be framed to enhance the necessary infrastructure and improve the learning systems of healthcare workers, considering the conditions brought on by diseases of a pandemic nature. It is emphasized that prior policy planning is necessary to mitigate any future infectious threats. Quality healthcare at grassroots levels could be a harbinger of change in the overall healthcare set-up, which would lessen the burden on secondary and tertiary healthcare institutes (Teena Chopra et al., 2021).

The public health network must be strengthened by expanding and enhancing hospital frameworks. Several publications have emphasized the crucial part that hospital pharmacies play in battling COVID-19. The effectiveness of the hospital is increased through close collaboration between its many departments. Within hospitals, there is a requirement for cross-sector and cross-professional cooperation (Bragazzi,2021). Following an analysis of the circumstances of hospitals in Cologne, Germany, experienced during COVID. It was determined that fresh challenges require fresh approaches. The hospitals in Cologne, Germany, adopted one of the best practices: designing a dynamic mechanism to receive a large influx of patients efficiently. (Max Augustin et al., 2020). There was separate triage and the use of ICT tools. Patients were segregated and treated as per their medical conditions.

Different organizations at the world level employ researchers to undertake various projects. There is a need to have continuous data reporters in each district who could provide real-time figures of ailments reported in the area, even in typical situations. Capacity building challenges operational effectiveness, efficiency, and resource mobilization in the health sector. Health care workers without proper know-how of the technology tools could not use the technological gadgets. The crucial lessons learned during the outbreak were healthcare workers' use of ICT tools to identify contacts and supervise quarantine(Soman et al., 2020).

It is necessary to alter health workforce policy and management in the context of the COVID-19 pandemic. The use of national and international information technology platforms is required to expedite training, instil new skills, and support distant e-learning. No healthcare worker should be subjected to those tasks for which he has no competency. Capacity-building interventions should be undertaken in any organization considering the highest priority outcomes (Decorby-Watson,2018).

Priorities and context need to be assessed at the organizational and systems level. Organizations should evaluate the parameters which are critical for any capacity-enhancing intervention. In resource-constrained settings, capacity building is limited. Governance in fields of health should aim at inclusion, mutual learning, transparency, and accountability (Ward. et al.,2018). It could be done only when local health conditions are improved, and global inequities are minimized. Even with meagre resources, capacity-building programs can be developed and implemented (Al Rabayah et al., 2018). Improving healthcare capability through ICT shall form one of the core foundations of a robust healthcare system. (Madhok et al., 2018). One of these should be the use of online resources in patient management.

Innovations and modifications in existing policies and programs could enhance productivity and service delivery. There is a deficiency in the healthcare system's COVID-19 prevention strategies (Mersha et al., 2021). The practice is impacted by social factors, obstacles faced by healthcare providers, institutional obstacles, and an absence of communication and support. The essential supplies in the infrastructures and healthcare facilities must be prioritized, and options must be provided to equip healthcare workers. Healthcare workers need recognition, and due attention must be given to them.

The main requirements are preventive strategies like screening for anxiety, education about transmission, and psychosocial support. Workshops and symposiums need to be conducted as well as social media for information dissemination. Seminars, refresher training programs, and publications would enhance the knowledge of healthcare workers (Subramanian et al., 2021).

Testing forms an integral part of the covid management strategy. The personnel associated with this task need to upgrade their sample collection, transport, and processing skills. Building long-term health emergency preparation through investment Countries need to augment the trained staff during the COVID-19 pandemic and post such employees where there is an indication of a spike in any infectious disease. The government should invest significantly in building infrastructure, capability building, and bolstering healthcare services to ensure that an institution can function effectively amid public health emergencies. (Ranjan & Saurabh, 2020).

To make the functioning of healthcare professionals more efficient, ethical standards that strike a balance between society's requirements and personal dangers must be developed. (Ast & Nyhuis, 2022) believe that the workforce is a significant part of an organizational system and might be volatile due to person-specific performance and different degrees of competence. The enhancement of competencies is required to achieve the set goals and ensure product

effectiveness. Functional flexibility is crucial since it indicates the number of possible employee-task combinations given the average number of learned tasks per employee. Short-term absences and functional fluctuations are two significant work hazards. If these issues materialize without warning, the workforce must change to offset the effects. Risk-optimized functional flexibility and chalking out training programs based on the above facts would help the organization function smoothly even under unfavourable circumstances.

Systems Theory, developed by Bertlaneffy, Katz, and Kahn, argues that an organization can be viewed as a system that refers to a complex whole of many subsystems or parts. These sub-systems may not synergize; therefore, the challenge is to make conscious efforts to ensure unity, integrity, or synergy. It requires an equilibrium among various sub-systems, even though distinct and unimportant. Successful organizations export entropy and import negentropy. This can be done by adopting best practices or benchmark behaviour management standards. The Human Subsystem comprises fundamental human constituents or human resources who work for the organization. This health organisation's sub-system forms the capacity-building subject because of pandemic outbreaks like COVID-19.

2.2 Studies on the national scenario of capacity building of healthcare workers to meet pandemic-like situations.

The Indian healthcare sector was previously not receiving much attention from the country, but COVID-19 has changed that. On the one hand, given the size of the country's population, India's healthcare system has done an excellent job of identifying and treating people with COVID-19 infections. On the other hand, it must deal with numerous challenges, just like those faced by other sectors. Frontline healthcare personnel are one of the most crucial pillars in stopping the COVID-19 pandemic. Even the best infrastructure would fall short if our frontline people were not safe and given the needed support.

As a precaution for the broader population, it is crucial to protect these people's health considering the seriousness of the outbreak. To do this, it is essential to ascertain how frequently medical personnel experiences psychological problems. On the other side, there are not many assessments or mental health therapies for this group anywhere in the world, let alone in India. Some information on frontline healthcare providers' manifestations of mental health is available from India (Chew et al., 2020).

(Aswin, S.2021) assessed knowledge and practices among various healthcare workers in Kerala and found that through continuous field work, their skills have enhanced, and there is a need to conduct COVID-19 training and seminars to equip healthcare workers to combat the disease.

Before COVID-19, India planned to increase its spending on the public health sector. However, amid COVID-19, it spent significantly more than intended. Other health-related problems in India, such as the poverty crisis, newborn healthcare, etc., have worsened due to this epidemic. The 15th Finance Commission has estimated that the Ministry of Health will receive 5.38 lakh crores between 2020 and 2025 for the healthcare system, vaccination, screening, monitoring, and COVID-19 therapy. This sum would considerably rise if the non-COVID-19 requirements were included (Kurian, 2021).

With the world's most diversified population (about 1.38 billion), India's medical institutions face a particularly challenging situation. This enormous population is undoubtedly one of the leading causes of the average quality of healthcare facilities and the general financial situation in a developing country. According to estimations regarding the availability of healthcare personnel, there is only one doctor for every 1666 people in India. The government has proposed a nationwide program called Ayushman Bharat to improve people's health. Due to the accessibility of expensive medications, the number of sterile births has significantly decreased. Similarly, new technologies like cloud computing have been gaining popularity for connecting doctors to their patients and diseases. Cloud computing can facilitate the clustering of data and its effective recovery when necessary (Parekh & Saleena, 2015).

IoT-based apps are also being studied for medication reminders for patients and monitoring purposes, which could change patient healthcare relationships (Zanjal & Talmale, 2016). India still has a long path ahead of it because it looks to be facing specific persistent issues like this pandemic that must be resolved immediately.

Both a national and a worldwide impact are provided by public health, but achieving the desired goals is hampered by the imbalance between supply and demand. (Kavya. & Sanjay,2010). This sector was not developed to the optimum, resulting in various issues during the Coronavirus outbreak.

It is crucial to emphasize human health to promote the well-being of all age groups, gender equality, and women's empowerment. There is a resurgence of interest in global health due to the creation of the Sustainable Development Goals and Millennium Development Goals. The availability of enough qualified staff motivated to do their jobs well is essential for healthcare

systems to deliver patient-centred, secure, effective, and standard-quality services. The responsibility of the international community to prepare for pandemics is outlined in SDG 3's target D. The "capacity of all countries, impoverished countries, for early warning, risk mitigation, and management of national and global health concerns" is called for to be strengthened. With a plethora of new finances and facilities, the Ebola crisis of 2014–2016 changed how the international community perceived global health problems. The efficacy of responses and spending will be even more critical to maximize the impact of restricted resources, such as official development aid. As a result, there is a need for increased cooperation between development actors and local health systems (OECD,2021). The public health sector has also made enormous strides with the aid of public hospitals in India. The government has undertaken several programs that are helping to promote affordable check-ups and basic healthcare amenities. The finest resource so far has been medical tourism. It incorporates the two fundamental ideas of healthcare and tourism.

Medical tourism has allowed patients to receive better and quicker treatments at no cost, despite the exorbitant prices corporate hospitals and doctors charge. Every year, India welcomes 15,000 medical tourists. The following years are projected to see a 15% growth in these figures (Shankar, 2015)

The large population requires effective managerial interventions at the base or grass root level. Timely government interventions minimize mortality(Nittayasoot et al., 2021). The whole government approach and effective risk communication to the public at the very early stage effectively contain the spread of pandemics. In the last decade, there has been a dramatic shift in disease patterns in India. Numerous non-communicable diseases are rising and must be investigated (Gupta et al., 2019).

There is an urgent need to modify our health governance according to the changing circumstances. It needs resource allocation as well as increasing human resources. While containing the surge of COVID-19, the health administration needs to be on the toes for other communicable diseases which assume dangerous proportions during favourable seasons. It is time to spend public health money and prepare for upcoming pandemic illnesses. Before the failure of healthcare systems during the emergency-like situations created by the Coronavirus, there is a need to investigate these systems and analyze how to make them more vibrant and flexible in their responses to these conditions(Kruk et al., 2017).

Formulating a standard protocol for disinfecting various gadgets used during the treatment of covid positive patients is necessary. Doctors and other healthcare workers need to be provided training regarding the safe use of the tools employed for pandemic-stricken patients(Agarwal et al., 2021).

Electronic equipment, face masks, and PPE kits form the backbone of the overall covid treatment apparatus. Other manufacturing and healthcare sectors must collaborate to make the devices more beneficial and ergonomic.

Concerns and worries were expressed regarding working directly with highly infectious COVID-19 patients(Alreshidi. et al., 2020). The investigation gave policymakers and health management insight into dealing with healthcare workers' needs and adapting health management practices sensitively. Representatives from health and safety need to be trained whose educational background would not have likely qualified them for their task(Yassi et al., 2009).

In India, there is a disparity between clinical, staff, and non-clinical. There is a need to represent the non-clinical staff in all matters affecting the organization's overall functioning. Capacity building would denote additional training and developing mechanisms such as feedback opportunities and health worker participation in local policymaking (Boulding, 2017).

There is a need for more support for all healthcare workers at the primary and secondary levels in India and to provide them with a sense of entitlement to the system's overall functioning. Various managerial activities could be undertaken for this purpose (Ranjalkar et al., 2021).

National Health Mission conducts various activities aimed at capacity building in India. It Creates and formulates training and reference materials for all participating health service cadres. It Provides funding to States and UTs so they can publish training materials and other brochures regarding information dissemination among healthcare workers(NHM,2018).

There is a need for more significant investments in this sector. Investments in health-related human resources help improve the healthcare system and the job and economy. India stands to gain in several ways from increased investments in the health workforce. This study identifies areas for health workforce investment in India and provides current estimations on the healthcare workers' size, nature, and composition. The healthcare system needs to improve by providing leadership and finances to make the workers self-reliant. Cost-effective and sustained strategies must be adopted to minimize the collateral healthcare effects during

pandemics. Existing healthcare facilities providing outpatient services are constrained in their functioning during pandemic-like situations(Garg. et al., 2020).

Proper planning, communication, and coordination between health policymakers and managers at the primary level are needed to ensure preparedness for meeting emergencies. Psychological problems faced by medical/non-medical individuals would directly impact the control of covid-19(Singh et al., 2020). Their overall well-being, in addition to their well-being, increases productivity.

Although the health staff is one of the essential pillars of the healthcare system, worldwide COVID-19 safety preparation is still insufficient. It leads to an increase in the number of health workers having COVID-19 infection, making this group the most susceptible to the pandemic. Most nations lack sufficient and high-quality personal protective equipment, which high rates exposes health workers to the deadly SARS-COV-2 virus. In addition, health professionals' neglect to adopt safety behaviours can sometimes result in them becoming infected.

Healthcare administration should take recourse to adopt best practices from management and industries. Health administration is an interdisciplinary field that could benefit from imbibing the already-tested practices from sister disciplines(Christine,2019). Cross-cultural implications are to be seen. Environmental settings of the healthcare system must be considered before applying any practice.

In the Indian context, public health administration shall consider social and cultural settings. Successive governments promised to transform the Indian healthcare system. Despite many measures, there is still a wider gap between the rich and poor(Patel et al.,2015). India must carve out a new healthcare system built around primary health centres. It should provide quality services at affordable rates. Only when healthcare inequity is eliminated can we boast of universal health coverage. Structural and functional modifications are necessary to achieve India's universal health care (Kumar,2014). There is a need to provide adequate infrastructure in hospitals. Health administration has a vital role in making universal healthcare a reality. Current crises allow us to investigate ICU infrastructure and the number of intensivists(Agrawal & Ozair, 2020). As a long-term solution, all ICUs must be accredited by a national body throughout India. This will ensure a minimum standard of care and resultantly training.

One of the main issues plaguing our health system is the decision-making process within the health administration. Centralized planning must concern itself with medium- and long-term

goals, while short-term issues should be decentralized (Negandhi& Zodpey,2008). Societal needs are to be considered while formulating policies regarding health.

Doctors and nurses, in particular, treated COVID-19 patients. Though contact tracing included many frontline employees and social activists, women caregivers and healthcare professionals were sent in to continue the immunization program, which resulted in community workers' absence (Ministry of Health And Family Welfare,2021). It resulted in various problems with the immunization process. Policies must be in sync with the realities existing in society. Public health in India needs leaders in grassroots leaders, organizational leaders, national leaders, international leaders, and academic leaders(Anand,2018). There is a need for leadership courses for public health administration in India. A skilled and competent workforce would raise service delivery standards to par with developed systems.

The recommendations made by different expert groups over the past seven decades have formed India's Human Resource Hiring policy in the health sector. In light of the critical shortage and unequal availability of the healthcare workforce in the country, most of these committees asked for a significant increase in recruitment and posting, maintaining a minimal degree of physical capacity as per population levels and ensuring that health professionals have a suitable range of skills. (Planning Commission Report 2012)

There is a direct correlation between capacity building and healthcare institutions' workforce output. Service delivery and satisfaction are the hallmarks of competent and able workers (Rao,2019). Sustained capacity building of personnel related to healthcare Programmes results in better outputs from those Programmes. A comprehensive plan focused on the requirements of both the individual and the workplace is required to provide healthcare workers with a safe working environment (Bhatnagar. et al., 2020).

Many healthcare workers' deficiencies could be improved by providing adequate facilities and, adopting a robust infection control program, having adequately trained and motivated staff(Joshi,2018). There is a need to provide proper authority and accountability to competent supervisors. The role of capacity-building programs is paramount as it provides a continuum of capable personnel.

In addition to other measures, there is a need to carry out training for all the healthcare providers who take care of patients having other communicable diseases (Agarwal, Nagi, & Sarkar.,2020). These include medical professionals such as doctors, nurses, paramedics, patient transporter, phlebotomists, lab technicians, and housekeeper staff. The Covid pandemic has

highlighted the gaps in India's healthcare, education, and pharmacy professional training for preparedness and response to emergencies (Arura,2020). A thorough review of population health needs is necessary to prepare healthcare professionals to satisfy these needs effectively.

Another area that requires governmental attention is the uneven distribution of healthcare workers across the rural and urban areas in the various states. About two-thirds of the medical personnel in India are located in urban areas, leaving the rural areas in desperate need of medical personnel or compelled to travel to urban areas to get their services or both. The uneven availability of the health workforce across Indian states is also noticed. Most poorer states severely lack health professionals, including Bihar, Jharkhand, Odisha, Rajasthan, Uttar Pradesh, etc. During the Coronavirus spread, these states were severely affected. To comprehend the causes of such a lopsided allocation between regions and geographical complexity, a more thorough analysis is necessary, and remedial measures must be taken to correct the deficiencies (Karan et al., 2021).

COVID-19 has highlighted the potential to utilize new and developing technologies more effectively to enhance care delivery, facilitate quick and efficient communications, and enhance access to care through mobile-based and internet health treatments. This is an area where investing in workforce training and technology could pay off. Aarogya Setu and Cowin websites are examples.

Various healthcare workers lack any formal training. The government needs to be ready to invest in up-skilling initiatives to enhance their level of services and include them in various compassionate and ancillary medical health services. In addition to other measures, there is a need to train all healthcare providers who care for the patients(Nazia Anup et al.,2020).

According to some researchers, there is still a need to increase public healthcare funding. Private healthcare organizations follow the maxim of profit (Thiagrajan,2020). Private sector organizations cannot collaborate with government programs in a welfare state to accomplish social objectives. Rethinking healthcare regulations and giving public health organizations the lead in executing various healthcare projects are necessary. Regarding the vulnerable groups, a word of warning is needed. A significant section of society without enough resources must be considered for providing affordable healthcare services during the COVID-19 pandemic. The disease must not spread to high-risk populations unless appropriate measures are taken to stop it. (Singh et al., 2020).

Population density-based interventions are required. These measures ought to cover appropriate social and medical services. There is a suggestion for making policy measures to contain the pandemic, considering the population density of an area(Tyagi. et al. 2021). Based on such presumptions, adding more advanced medical equipment and human resources in the area in response to the demands of the scenario will boost service delivery by enhancing the availability of equipment and staff at hospitals as per local necessity. At the local level, it might successfully manage Coronavirus-induced illness.

Paying attention to India's public healthcare system is a requirement of the current situation (Changotra. et al., 2020). Because just 1.28% of GDP is allotted to the health sector, it is underfunded. A wake-up call from COVID-19 is needed to make long-term improvements to the system of public healthcare. Due to the pandemic crisis, a "whole of government" and "whole of society" strategy is required to overcome the crisis (Chowdhury and Joma 2020). Under credible leadership, inclusive, accountable, and flexible policymaking and a well-established institutional framework shall form the basic mantra to respond to any eventuality like COVID-19.

Critical considerations in decision-making for meeting the challenges posed by COVID-like situations include how COVID-19 responses would impact longstanding priority areas for health, assessing necessity and severity to prioritize adaptations and workarounds allocating necessary resources(Krubiner et al. 2020).

Record different patients' health parameters admitted for Coronavirus (Mohan et al., 2020). Only competent, skilled health care workers could operate with zeal and zest. To deal with such emergencies, technical knowledge is the prerequisite to drawing out results from various medical procedures related to COVID-19.

Healthcare workers are frontline soldiers in the Coronavirus pandemic(Dabholkar et.al. 2020). They are more vulnerable to contracting such diseases. They are under stressful conditions. Their anxieties need to be combated by increasing their morale by making their workplaces safe and providing added monetary incentives to discharge their duties smoothly and best of their capabilities.

(Maurya et al., 2022) analyzed the knowing, believing, and doing after several months of the COVID-19 pandemic and found that the most often cited reason for feeling more vulnerable was a lack of personal protective equipment (PPE). This was followed by dealing with the public, their lack of commitment to preventive measures, poor ventilation, and workplace

crowding. They concluded that numerous Healthcare Workers, particularly technicians and students, were found to lack the necessary understanding of COVID-19. Proper hygiene and judicious use of masks prevent Coronavirus transmission.

In their study,(Sultan et al.,2021) found that the use of masks was misutilized by many participant healthcare workers. After analyzing the results, they were given training regarding the use of masks and other protective measures, and again they were studied for the very objective. It was found that there were remarkable differences in their practical know-how about such activities. Healthcare workers require proper training and educational interventions to build and motivate them. As such interprofessional training of potential healthcare workers increases students' perceived self-efficacy more than traditional clinical training(Norgaard et al., 2013).

Most healthcare workers lacked exposure to such practices. The health care workers must work within a dynamic environment. This environment is provided in rural as well as urban areas in India. There could be rehearsals for exigencies at every public healthcare facility. This could be a hands-on practice for healthcare workers. They should be capable of working in these ever-changing situations. The country’s healthcare workers will get protection and exposure through education and training(Ali et al., 2020).

(Gupta et al., 2021) assessed the burnout among healthcare workers in India and found that healthcare professionals' stress and burnout levels have increased at an unprecedented rate because of COVID. It has been found that heart rate variability (HRV) reflects stress and burnout. Regular checking of health parameters of the healthcare system should form a part of standard Operating Procedures in all the institutions where the services for pandemic-related ailments are provided

The willingness of healthcare workers, incentives, availability of PPEs, and psychological support should form an essential aspect of personnel management at healthcare institutions. There should be a friendly environment where the workers find it full of joy and satisfaction to do any task assigned by their superiors. Hospital managers should initiate actionable practices targeted at non-COVID areas(Sureka et al., 2021). The resources in the form of a workforce need to be made immune from other affected areas.

Post-COVID, there is a need to modify the institutional systems and practices for high morale e-stuff, learn from online sources like digital health and telemedicine and learning experiences

of the diagonal approach(Arup et al.,2020). This will make the system robust to meet future exigencies.

Various studies have identified numerous areas of concern regarding the Indian health workforce. Research has shown that there is a severe scarcity of physicians and nurses, as well as a lack of a talent mix. The two leading causes of the scarcity of educated nurses in India are the inadequate number of institutions offering nursing training and the overseas migration of Indian nurses. (Rao et al., 2011) (K. D. Rao et al., 2012).

The gender and age distribution of the health workforce shows a definite numerical advantage for men in the categories of doctors, dentists, and AYUSH, while women exceed men in the category of nurses. More than 25% of the health workforce is under 30, and almost two-thirds of all workers are under 40. Compared to doctors (23%) and other health professionals, dentists and nurses have a higher presence (38% and 30%, respectively) among the young age group (15-29 years). As a result, doctors are more prevalent in the senior age group of 50 years and above (18%) than dentists (3%) and nurses (5.5%), who are both more prevalent in the same age group (Karan et al., 2021).

Low- and middle-income countries' health systems routinely hold facilities as arbitrary and ambiguous performance standards. As a result, management and service providers may exaggerate or manipulate data to create the impression that the system is in operation., which can lead to hollow compliance and "performing out." (Das et al., 2022)

2.3 Studies about capacity building in Jammu and Kashmir regarding capacity building of healthcare workers to meet pandemic-like situations and assessing patient satisfaction.

There is a need to efficiently utilize the existing health infrastructures in India and improve them. There are disparities in handling pandemics among different states. Uniformity in the policy to mitigate the disease is the need of the hour(Maity et al., 2020). Sufficient data regarding various social parameters must be made available in all states at district levels. It will help properly analyze the disasters like Coronavirus outbreaks to make policies regarding such occurrences(Acharya & Akash, 2020). It would help proper policy formulation to meet the issues arising from vulnerability to various pandemic diseases. The fact that policy planning needs sufficient data calls for modifying India’s data structure.

A national microlevel data policy is required to enable proactive and appropriate management to lessen the effects of future disasters of this nature. The importance of training and capacity building cannot be neglected(Ian. & Jannie,2002). There is a direct correlation between

continuous communication and continuous education. Health care workers should feel that they are learning every day. Because of shutdowns and the COVID curfews, the lines of communication were weak during the first phase of the disease in the Union Territory (Shoib & Arafat, 2020). Local-level capacity-building initiatives could be undertaken to enhance the skills of the workers, This capacity-building at a district-level hospital should not be for a specific class but for everyone working there. It fosters a culture of amity, learning, and development at all levels in the hospital (George et al., 2021).

There were many instances of mismanagement of the COVID-infected patients. The main reason for the same lies in infrastructure and the lack of capabilities of healthcare personnel. The absence of prior planning prevented healthcare professionals from being mentally ready to handle COVID-19-related circumstances. (Bhat et al. 2020).

The lockout and the idea of working from home damaged the patients' psychological conditions. The administration of the Union Territory took several steps to contain the pandemic. It included media awareness campaigns, debunking rumours, and sending out enough police officers to enforce lockdown. (Saleem et al. 2020), earmarking hospitals, and arranging other infrastructure for patients. Coordination among various departments forms the key to meeting exigencies in the future upon scrutinizing the relation between temperature and the Spread of Coronavirus. It was found that temperature should not be considered a yardstick for interventions to control the disease(Meraj et al., 2020). Regional Infrastructural up-gradation and other developmental measures need to be taken because Coronavirus is one of the biggest challenges faced by human civilization. (Kendall and Horwitz,2020).

As health is a state subject, the local governments have an unambiguous constitutional mandate to develop the public health sector at the regional level. Public health does not get effective by patchwork. There is a need for reformation on a massive scale. Procedures regarding tests, vaccines, and frontline workers' capacity enhancement need to be re-energized on a priority basis. Healthcare managers and policymakers at the regional level need to critically coordinate the information to improve capacities rapidly and to organize the shifting of patients from one region to another within the state(Gitto et al., 2021). At the regional level, there is a need to enhance early detection systems, distribution network resilience, medical research, development, and cyber security and technology. Many resources were spared by developing scientific outpatient management of COVID-19-related patients. This procedure could be undertaken at local levels. (Chevallier Lugon et al., 2021). These practices are economically

beneficial and are the hour's need in resource-scarce countries. Each pandemic has specific lessons for all stakeholders(Lai Allen,2014).

Proper plans need to be made for analyzing the pandemic diseases, their spread, healthcare up-gradation, and other related aspects. The general population showed adequate knowledge of COVID-19 and a positive attitude towards this pandemic. Trained personnel within the state or UT would greatly help meet pandemic-like eventualities. These two positives would necessarily enhance the efficacy of COVID-19 management in the long run. The cohesive efforts of all the stakeholders at multiple levels will decide the future of this war against contagion (Yousaf et al., 2020).

(Bajpai,2014) examined the significant problems faced by basic healthcare providers in India and suggested medical solutions to overcome them. Based on several reports and published material, the following five fundamental issues that the author has highlighted: (1) Lack of hospital infrastructure; (2) lack of hospital staff; (3) heavy family use of hospital; (4) illegal character of hospital administrations; and (5) lack of specialists. The study suggested that improving living conditions near open hospitals in rural areas could alleviate the shortage of hospital staff. Thus, the foundational shortage might be overcome by utilizing the current outpatient clinics and starting night shifts in addition to the morning hours.

Additionally, it was shown by the administration specialists that restricting private practice may improve the nature of hospital administrations. In addition to these problems, it was discovered that preventative hospital programs were inadequate and their excessive reliance on medical care. It has been established that the administration is reluctant to make up hospital arrangements for those in need because of the changed priorities of the government.

2.4 Studies on methods of assessing the relationship between patient satisfaction and capacity building of healthcare workers

Public health organizations are becoming more aware of the necessity to evaluate and enhance the quality of their programs, data, and policies systematically and quantitatively. By assessing quality, organizations may monitor their progress toward public health goals and become more responsive to the individuals they serve and policymakers. The healthcare system tries to fill the gaps in service delivery on patient feedback. Various aspects of services received by the patients are reflected upon through the feedback process. However, evaluating quality is challenging and requires accurate determination and characterization of practical measures. Six

different paradigms are used in the literature to explain consumer or patient satisfaction and specify the metrics that should be used regarding healthcare services.

Dis-confirmation Approach: According to this paradigm, patient satisfaction is validated when services meet expectations. It falls into three categories: ideal when expectations are positively disconfirmed (usually, perceptions are more remarkable than expectations), not acceptable satisfaction when expectations are negatively disconfirmed, and when expectations are confirmed, perceived quality is adequate (Donabedian A, 2002).

Performance Perception Approach: Included in this is the idea of patient happiness, which sets itself apart from service quality. An indication of perceived quality is how well hospitals do in terms of services. When it comes to satisfaction and service quality, which should only be evaluated in the context of hospital care delivery, a hypothesis is not taken to be true. (Donabedian A, 2002).

Normative Deficit Approach: With standards or basic requirements, quality is measured. Standards for care provision (how the service is delivered), technical competence (the required skill, knowledge, and information to perform the service), and material quality are used to evaluate service quality (the tools utilized and the setting where the service is. These standards, known as experience-based norms and emphasize desired performance in satisfying customer desires and needs, have been differentiated from the concept of expectations as they are typically defined. These standards relate to the efficiency customers think service items can attain (Donabedian A, 2002).

Zeithamlai, Parasuraman, and Barry formulated SERVQUAL in 1985 for the non-medical industry. SQ was created to evaluate service quality and is based on established characteristics. The SERVQUAL model, a research instrument, evaluates how tangibility, reliability, responsibility, confidence, and empathy affect customers' perceptions of each other. (Parasuraman et al., 1985).

According to Szyc et al., efficient mistake detection throughout the development and delivery of services is beneficial to high quality in the medical profession (Syzc et al.,2012). The 44 items that make up the SERVQUAL scale are intended to aid in evaluating the discrepancy between expectations and perceptions. The first 22 questions focus on the client's expectations, and the second 22 ask about the client's opinions of the services rendered. The responses to the questions are given in a five-level Likert scale format, with one denoting High dissatisfaction

and five denoting High satisfaction. The gap between the evaluations of customer perceptions and expectations is then used to calculate the service quality rating using the following formula:

SQ = P-E, where P represents the perceived quality of the services supplied, and E represents the expected level of service quality.

A favourable gap analysis means that the client's expectations have been satisfied, i.e., the client's opinion of the services is very high. On the other side, if the gap score is negative, it indicates that the services did not live up to the client's expectations and that their opinion of the experience is unsatisfactory.

2.5 Studies about capacity-building measures in public and private sector healthcare institutions

The Indian healthcare sector has had numerous upheavals, but the government's aim to provide timely and high-quality treatment to everyone has shown to be beneficial in fostering a new age in the field. The National Health Policy guarantees a good and healthy lifestyle for everyone, even those struggling financially. In India, public and private hospitals coexist in the same healthcare system. Metropolitan areas typically have private hospitals, which only offer secondary and tertiary services. Public hospitals are often found in rural India (Vijai. K, 2015)

India's complicated health care delivery system combines public and private providers and has developed into a competitive, performance-driven sector that calls for the most incredible human resource, technological, and financial management abilities. Over the past few decades, the ageing population, rising income levels, expanding health awareness, and shifting adaptive attitudes toward preventative healthcare have contributed to our nation's need for health care. The high costs that patients will pay when using public health services are one of the main barriers to their mobilization. Hence, controlling user fees in this industry (Sembiah S. et al.,2018).

Various private healthcare providers made various modifications to their regular practices. (Mannan et al., 2022) analyzed the impact of COVID on private-sector healthcare providers providing services to TB patients in India. Even though COVID-19 limits caused considerable drops in patient attendance at private facilities, their data revealed that most providers were active and that TB care costs largely remained stable in the first quarter of 2021. The private sector TB care providers have adopted various beneficial measures during the outbreak.

Additional research was required to determine the pandemic's effects on the private health sector because the COVID-19 waves after this one were more severe or broader in spread.

A resource that needs to be calculated to be effectively included in government healthcare during pandemics is the private medical sector. The urgent need is for a streamlined process to enable the corporate and governmental sectors to work together towards a common goal (Davalbhakta et al., 2020).

During the COVID period, as public healthcare institutions were overburdened with COVID-19 patients, various district administrations requested the private healthcare institutes to provide space for conducting Non-COVID activities. (Davalbhakta et al., 2020) .

An unusual illness with magical transmission and the ability to obliterate the human population is projected to burden the public health service more than it can handle on its own. Our nation has a sizable private healthcare industry that is not only prepared but also eager to share the burden of illness. The private health sector has shown an encouraging response in terms of contributions to the epidemic. The development of the COVISHIELD vaccine by the Serum Institute of India in collaboration with Oxford AstraZeneca itself shows that the private sector has the potential to provide quality and regulated services.

A practical method to encourage public-private cooperation may be beneficial to reduce the impact on the community and lower the mortality rate. The first step in resolving ambiguities between the public and private sectors should be an honest, constructive analysis that should take place immediately.

2.6 Research gap

Most of the available literature provides different perspectives on the topic, theory, and practice at global levels. There is not enough research on Public Health Administration at the national and local levels. Concerning Jammu and Kashmir, ample literature is scarce about the management aspect of the Health Administration. In present times, the whole world suffered grave crises due to COVID-19. There has been mismanagement and a lack of coordination among different stakeholders at various levels.

Though we have policies regarding healthcare, the sudden havoc caused by the outbreak ringed alarm bells about the state of readiness of our healthcare setup. As is well known, here, it is

planning by default. Serious questions are arising, whether our Health administration was ready, or if it was ready, how there were glaring lapses. There is a need to scrutinize whole healthcare adopted policies and programs of COVID management. Healthcare Policy formulated in 2017, has various programs for capacity building, but the pandemic preparation has not been given the due focus. There is a scarcity of research related to the capacity building of health care workers to meet the challenges that arise due to pandemic diseases. Though some works are related to other parts of the globe and our country, the skills and capacities of healthcare personnel have not received due attention. Various suggestions are provided in different international papers. These solutions are context or situation-specific. Direct application in India, an underdeveloped country, may not yield better results.

There is a need for comprehensive research related human resource management aspect of health care all over India in general and Jammu and Kashmir in specific. No research works are related to this topic in the targeted district of the Union Territory. There is an absence of enough research material on capacity-building activities of the healthcare sector in Pulwama (J&K). The value of health care spending is increasingly being assessed by providers, patients, and purchasers through quality monitoring. No research work has been published regarding the relationship between healthcare workers' capabilities and the satisfaction of patients in the Pulwama district. Literature is absent regarding different methods of training and their efficacy concerning healthcare workers.

Over the past ten years, significant progress has been made in the science of quality measurement, but there are still numerous obstacles to overcome before quality monitoring can fully fulfil its promise as a force against the demands of cost minimization. The prevalence of COVID-19 has made this work reasonably necessary concerning public health, administration, disaster, and human resource management. This intended work would bridge the policy void and provide valuable inputs for the betterment of the whole healthcare system. There is no concrete theory or study plan to measure the capacities of healthcare workers. This work would provide a comparative analysis of Healthcare and Human Resource capacity building and give an idea about the required capacity-building measures at par with the ecological settings of the whole system. This research shall increase the knowledge repository of the Public Administration concerning Public Health.

Chapter 3.

Research Methodology

Finding a research plan and methodology are typically found to be related. It is frequently linked to creating a questionnaire, gathering a little data, and then learning to use some fundamental statistics in the academic setting. The idea, or the research's point of view, is gradually taking shape. The terminological ambiguity surrounding the term "methodology" and its underlying connotations widens this picture even further. The terms ‘method and ‘methodology’ are often employed interchangeably (Jonker & Pennink, 2010).

The research technique constitutes a vital component of the research study. In the research endeavour, the approach used is crucial. The research technique clearly illustrates the development of the research project. The subject matter chosen by the researcher and the use of a methodology that best meets the needs of the study constitutes research methodology (Bazeley & Jackson, 2013) and (Shank et al., 2015).

The concepts and theories used for the research must be understood, and their relevance to the study's objectives must be examined. Deductive reasoning is the quantitative strategy adopted for the philosophical presumptions supporting the current investigation. Study methodology discusses the numerous approaches researchers typically use to examine the research problem and the justifications for each (Kothari, 2019). The process through which a researcher looks for knowledge on the selected issue is defined as the research methodology (Bazeley & Jackson, 2013). The information is gathered from patients and healthcare professionals via paper-based as well as online questionnaires and surveys; it primarily comprises closed questions. However, some open questions are also included. As a result, the objectives, research questions, research methodologies, and study design are thoroughly covered in this chapter. The limitations offered to round up the chapter are covered in the following sections, along with the data collection procedures, sampling techniques, and sample size determination applied in the study.

This chapter covers the research methodology, sample selection, patient and healthcare worker satisfaction concerning capacity building, and research plans to collect data from Pulwama, Sub District Hospitals Pampore, Tral, and Rajpora. In addition, it contains details of all the procedures, methods, and tools to conduct this research study.

3.1 Research Design

The general approach taken to integrate the many parts of the study logically and coherently is known as the research design (Glogowska, M. 2011). Creswell (2017) claims that the research design can be considered a road map for the research process, which is controlled and controllable by validating the facts and statistics. Exploratory, descriptive, explanatory, and experimental designs are among the several types of study designs (Wisdom, J.P et al. 2011). A comprehensive strategy is used in the study design to link the conceptual research topic to relevant empirical research. Doing good science or choosing a research design that most effectively achieves the study's goals, is the secret to producing high-quality research findings. A practical research project combines qualitative and quantitative methods (Mcnabb, 2012).

As a result, numerous qualitative and quantitative approaches were applied over various study phases to explore the connection between concepts and conceptual growth. The research is conducted to analyze the capacity-building of healthcare personnel during the COVID-19 outbreak, and their impact on the healthcare services rendered in district Pulwama, J&K. The research methodology consists of a mixed approach. Primary data is gathered through qualitative and quantitative methods, like focused group discussions, structured questionnaires, and personal visits to various healthcare facilities' offices. In addition to it, Right To Information applications have been resorted to. The online grievance monitoring cell also provided basic statistical data regarding healthcare facilities of the Pulwama district. People from different walks of life participated in a focused group discussion regarding the capacity building of healthcare personnel to meet pandemic-like situations. A pretested structured questionnaire with questions about the characteristics of the respondents, training in capacity development, and safety precautions was given out.

Secondary data is collected through sources like official websites, published reports, and other such means. This study's objective is to examine how healthcare workers responded to problems brought on by the COVID-19 pandemic. The circumstances are analyzed thoroughly, the role of healthcare workers is discussed, and policy changes are proposed that are required to provide a more vibrant and responsive skilled workforce to combat COVID-19-like situations.

3.2 Sampling Methodology

The term "sampling methodology" refers to a process or approach whereby the researcher chooses the sample for the study based on the research topic. The sampling process facilitates the researcher's ability to collect data more quickly and accurately (Sarantakos, 2013). In order

to estimate the characteristics of the entire population, sampling is also the process of selecting a small sample of people from a vast population. Instead of evaluating the perception of the entire population, sampling has several benefits, including speedier data collection and fewer data collection costs. Probability sampling and non-probability sampling are the two categories of sampling techniques.

There are many healthcare facilities in District Pulwama. The patients belonging to different catchment areas of Sub District Hospitals were treated at District Hospital Pulwama. District Hospital Pulwama was earmarked as the COVID Care hospital. Healthcare workers from different Sub District Hospitals of the district were transferred to this facility. Patients who availed of services for COVID-19 and the personnel who work in these institutions are the subjects of this research. To analyze the capacities of healthcare workers and the satisfaction of patients, various parameters of these institutions and feedback from patients and healthcare workers are calculated and analyzed. We analyze the capacities of healthcare workers in the District hospital Pulwama, Sub-District Hospitals Rajpora, Tral, and Pampore temporarily working at District Hospital Pulwama. To measure the service delivery, the patient satisfaction level is gauged by providing a structured questionnaire to those who availed of treatment for COVID-19 in these healthcare facilities. The specialists or administrators working in the healthcare institutes were contacted to validate the questionnaires' contents. This study's territorial extent encompasses the whole Pulwama district in Jammu and Kashmir. To get the opinion of various stakeholders regarding the capacity of healthcare workers to face the pandemic situation, a focus group discussion was also conducted. There were forty participants, prominent in different walks of life, in the focused group discussion. Their point of view is recorded, analyzed, and used in this research. The study includes analyzing both quantitative and qualitative aspects of the healthcare scenario in the district.

Stratified sampling was undertaken to include every section of the healthcare workers, and every group of patients was represented. A total sample size of 270 was taken, consisting of 210 common people treated for COVID-19, 20 key people including paramedical staff, doctors, administrators, and Chief Medical Officer and Director. For the Focus Group Discussion sample size was forty. The study included both quantitative and qualitative aspects. The information about various aspects of healthcare was collected from different community health blocks of the Pulwama district, specifically, Pampore, Tral, Pulwama, and Rajpora. This study

covers the Pulwama district's tehsils, which are Pulwama, Rajpora, Aripal, Litter Awantipora, Tral, Pampore, and Kakapora.

Primary and secondary data sources are utilized to fulfil the objectives of this research. Primary data was collected through field surveys, questionnaire techniques, and personnel meetings with various officials of different departments. Systematically designed structured questionnaires collected data for qualitative research. Besides, discussions with key stakeholders were held to elicit detailed information from different community sections. To ensure clarity, personal case studies of some healthcare workers and patients were also incorporated. Secondary data was collected through Right To Information requests, Government websites, archives, research journals, books, and newspapers.

3.2.1 Sample of healthcare workers

Healthcare workers comprising paramedical staff, doctors, and other ancillary staff were sampled based on the bedded capacity of the healthcare institution. Healthcare institutions with more than fifty bedded capacities in districts and Sub-districts have been selected. Twenty healthcare workers responded to the different questions set in a structured questionnaire-based interview. A standardized questionnaire about respondents' characteristics, capacity-building training, and protective measures was administered after being pretested. Questionaries were provided to all participants in the English Language. Based upon the age of the healthcare workers,12 were within the age group of (18-28 years), seven were in the (29 -38 years) age group, and 1 was within the age group of (39-48 years). It is shown in Table 3.1

Table 3.1 Age-related distribution of healthcare workers

Age Group	Number
18-28	12
29-38	7
39-48	1
Total	20

With respect to the designations of the healthcare workers, 5 were medical officers, three were from ANM and staff nurses, six were related to field staff, and six belonged to other sections of the health department. It is presented in Table 3.2 below.

Table 3.2 Designation of the participating healthcare workers

Designation	Number
Medical Officers	5
ANM & Staff Nurses	3
Field Staff	6
Others	6
Total	20

Concerning the sex composition of the group,14 were male, and six were female. It is represented in Table 3.3

Table 3.3 Sex-based distribution of participating healthcare workers

Sex	Number
Male	14
Female	6
Total	20

As the experience of the healthcare workers is also taken into account,9 participants had up to 5 years of experience. In the 6-10 years' experience group, there are 9 participants. There were two participants in the experience group of 11-15 years. It is shown in Table 3.4

Table 3.4 Experience-based distribution of the participating healthcare workers

Experience in years	Number of participants
Less than 5 years	9
6-10 years	9
11-15 years	2
Total	20

3.2.2 Sample of patients

Patient satisfaction is a significant parameter to gauge the capacities of the healthcare workers within a hospital as well as other health services providers like administrators such as Superintendents and Chief Medical Officers. There are continuous efforts for healthcare institutions to be in a certifiable state and maintain public trust. The patients and other outsider accomplices are provided services at the institutions of their admission. The nature and the standard of services provided by the hospitals get reflected by the feedback from the patients. For any organization, customers define quality feedback.

Similarly, the patient's responses regarding the services define the quality of training and infrastructural availability of the hospital. To achieve better quality goals, healthcare institutes set out various research to find the satisfaction level of the patients and discover strategies for serving them better. 210 patients were selected from the people who received treatments, for COVID-19-related complications, in various healthcare facilities located within the district of Pulwama. They were provided with a pre-tested questionnaire in English and the Kashmiri language. The questionnaire comprised questions reflecting upon the healthcare personnel's services and capacity building. Questionnaire-based interviews consisting of online and offline means were used to get information from them.

Patients who participated in this research work got treatments from District Hospital Pulwama falling within the catchment area of four healthcare facilities in the district.99 patients were from District Hospital Pulwama., 65 from Sub District Hospital(SDH) Pampore, 43 from SDH Rajpora, and three from SDH Tral. It is shown in Table 3.5

Table 3.5 Healthcare facilities wherefrom the participants belonged

Name of the catchment facility	Number of patients
District hospital Pulwama	99
SDH Pampore	65
SDH Rajpora	43
Govt hospital Tral	3
Total	210

Concerning the education of the patients,40 were postgraduate,34 were graduates,31 were 12^{th} class qualified,29 were matriculated,27 were primary educated,26 were illiterate, and 23 had

received some vernacular education, which is not existing at present. It is represented in Table 3.6

Table 3.6 Educational status of the participants

Qualification	Number
Postgraduate	40
Graduate	34
12th	31
Matriculation	29
Primary	27
Illiterate	26
Others	23
Total	210

With regard to sex composition, there were 109 males and 101 females. It is presented in Table 3.7, as shown below.

Table 3.7 Sex Composition of the patients

Sex	Number
Male	109
Female	101
Total	210

With respect to the ages of the patients,103 fell in the age group of (21-40 years),45 fell in the age group of greater than 60,38 in (41-60 years), and 24 in the less than 20 age group. It is represented in Table 3.8 as follows.

Table 3.8 Age composition of the patients

Age Group	Number
Less than 20	24
20-40	103
41-60	38
Greater than 60	45
Total	210

Sample Selection for the Focus Group Discussion

For the Focus Group Discussion, there were different stakeholders of COVID-19 management participated, the total number was 40 who belonged to different age groups, in the 18-28 age group there were 2 participants, in the 29-38 age group there were 14, in 39-48 years age group, there were 18 participants, for 49–58-year age group, there were 5 participants. For the Above 58 years age group, there was 1 participant. It is represented in Table 3.9 below

Table 3.9 Age groups of Focus Group Discussion

Age Group	Number
18-28	2
29-38	14
39-48	18
49-58	5
Above 58	1
Total	40

With respect to the designations of different participants in the focus group discussion, there were 15 medical officers, ten bureaucrats, five social workers, five academicians, and five belonging to other fields of life. It is shown in Table 3.10.

Table 3.10 Designation of participants in Focus Group Discussion

Designation	Number
Medical Officers	15
Bureaucrat	10
Social Work	5
Academic	5
Others	5
Total	40

Concerning the sex composition of the Focus Group Discussion, there were 31 males and nine females. It is presented in Table 3.11 as follows

Table 3.11 Sex Composition of The Focus Group Discussion

Sex	Number
Male	31
Female	9
Total	40

Experience of the Participants:

About the experience of the participants of the Focus Group Discussion, 3 had less than five years of service,17 fell in the group of 6-10 years group,13 in the 11-15 years group, and 7 in the greater than 15 years group. It is represented in the below-mentioned Table 3.12

Table 3.12 Experience of the Focus Group Discussion Participants

Years	Number
Less than 5 years	3
6-10 years	17
11-15 years	13
15-20 years	7
20-25 years	3
Total	40

3.3 Data sources

Any research primarily includes data collection as a necessary step. The data the researcher collects forms the basis for the research techniques performed (Keith Francis Punch 2014). The primary element that makes research methods easier is data gathered from numerous sources. Data can be collected using primary and secondary data collection approaches, both of which are crucial to achieving the study's goals. The primary online information sources are the websites of the World Health Organization, Central Bureau of Health Intelligence (India), Ministry of Health and Family Welfare (India), National Sample Survey Organization (India), Annual reports of Hospitals, Health Department (Jammu and Kashmir), Science Direct, Taylor, Emerald, JSTOR, Nature, and Francis. For the sake of this inquiry, many diaries, papers, books, and other materials were avoided. In addition to the internet-based information sources, I visited numerous institutions and agencies, for example, the Director of Health Services Kashmir, the Chief Medical Officer of Pulwama, Block Medical Officers of different blocks of Pulwama district, Medical Superintendents of District hospital and other Sub-district hospitals, Department of Health and Family Welfare, Camp office Srinagar and libraries of University of Kashmir and Islamic University of Science and Technology, to gather ancillary information. Data was used in this research through fieldwork by visiting various healthcare institutions and administrative offices associated with these facilities.

3.3.1 Primary data

Primary data collection is the most crucial method of obtaining the necessary information by combining many strategies. To accomplish the research goals, the researcher uses the primary data technique to collect raw data that will later be analyzed (Freedman, D. 2009). The main approaches for gathering data can be further divided into quantitative and qualitative research methodologies. Using questionnaires, the researcher conducts online or offline surveys as part of the quantitative data-gathering technique. Primary data was collected through field surveys, structured Questionnaire techniques, and personal interviews. Raw data regarding various parameters associated with this COVID-19 management was gathered from various healthcare-related offices.

3.3.2 Secondary data

Techniques for gathering secondary data incorporate a substantial quantity of theories and supporting data that have been gathered from various secondary sources. This method concentrates on obtaining a thorough idea of the subject (Padgett, 2016). Secondary data was collected through government reports, websites, journals, books, and newspapers.

3.4 Research Questions

(1) Does any health policy guide healthcare personnel in dealing with situations arising from pandemics?

(2) What measures have been taken to meet any unforeseen pandemic crisis?

(3) Are these policies or measures effective in fulfilling the demands of situations arising from COVID-19?

(4) What are various capacity-building measures for healthcare personnel in Pulwama?

(5) What are the main impediments to providing regular capacity-building avenues to the healthcare staff?

(6) How fruitful are the existing capacity-enhancing measures?

(7) Are the people who availed services from Public Health Systems in the District Pulwama during the Coronavirus outbreak satisfied with the services?

(8) What are the alternate measures that healthcare personnel consider must have been taken but not taken concerning COVID- 19 situation handling?

3.5 Research Objectives

Research objectives recommended by Research Advisory Committee include;

I.To analyze the role of healthcare workers in the recent Coronavirus outbreak in the district of Pulwama, Jammu, and Kashmir.

II.To explore the weaknesses in the present healthcare setup to make healthcare workers competent to face situations in hospitals and other institutions arising due to pandemic diseases.

III. To suggest policy measures for capacity building of healthcare personnel in Jammu and Kashmir.

3.6 Research framework to achieve the objectives

There are various stages involved in measuring the quality of services of healthcare institutions and finding its association with patient satisfaction and the capacities of healthcare workers. The first stage is the selection of healthcare institutions. Then input and selection of output for calculating efficiency. Hospitals selected for this study included Pulwama, Sub-District Hospitals of Pampore, Tral, and Rajpora.

Primary data was collected from the administrative offices of these institutions as well as through annual reports of the health department. This study has many stages in which a step-by-step data collection and analysis procedure was conducted. It was a multi-stage process. Sometimes these stages were followed in parallel and sometimes in serial order.

Development of Questionnaires

Questionnaire A1 was formulated to gauge patient satisfaction. It was meant to collect information regarding responses regarding the services availed by COVID-19 patients in different healthcare facilities in the district. The patients from the selected hospitals are provided with a structured questionnaire.

Part A consists of basic information about the patient. It comprised questions regarding demographic and economic aspects. These were meant to know about the full awareness of the patient regarding the scenario created by the Coronavirus.

Part B consists of the main questions in objective form.1 to 5 Likert Scale is used. It consisted of questions regarding the hospital's physical and human infrastructure availability. Treatment satisfaction questions are incorporated in this part as well.

Part C consists of opinion-based subjective questions. The participants are asked to give an opinion about various aspects of capacities regarding the healthcare facility where they received the treatment. Various research questions were directly put in parts B and C.

The above-explained questionnaire was also provided in the Local Kashmiri languages A2

The questionnaire regarding healthcare workers appended as A3 consists of three parts:

Part A regarding preliminary information about the demographic as well as the job description of the participants.

Part B consisted of main questions regarding the capacities possessed by the healthcare workers and imbibed in the system where they were working.

Part C comprised of Subjective questions where the healthcare workers were asked to give their opinions about different aspects of capacity building.

Expert Validation of the questionnaires:

Nine persons were contacted to validate the questionnaire: five consultants, a microbiologist, two academicians, and a statistical expert.

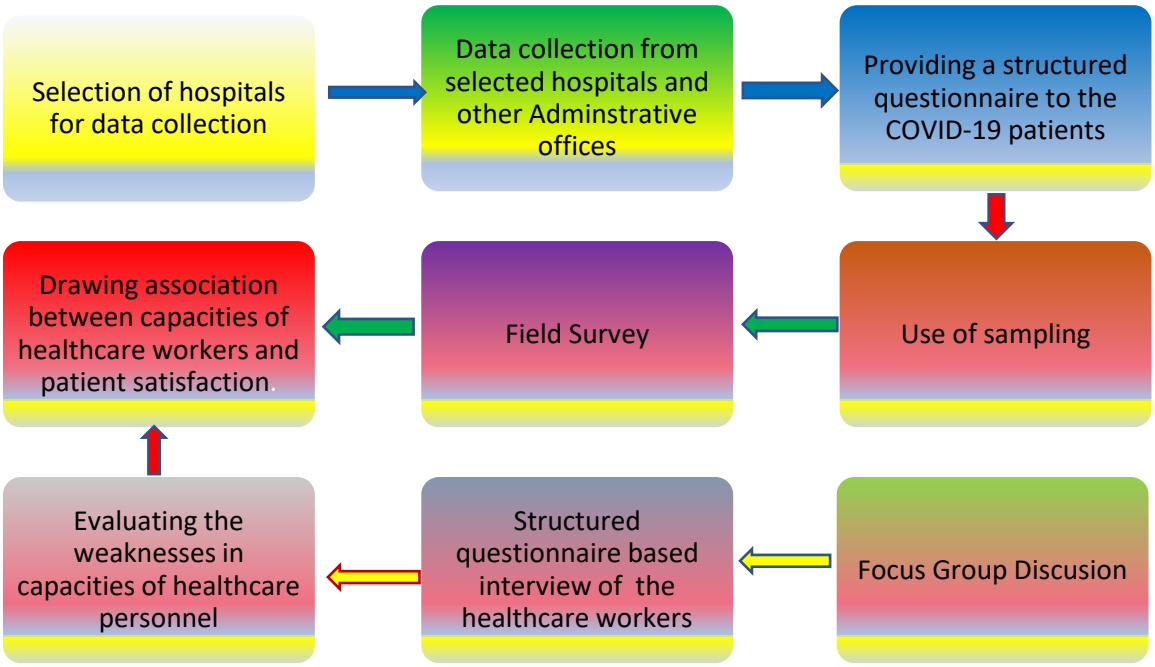
The Focus Group Discussion was undertaken with the stakeholders, where their opinions were solicited. They were also provided with a set of questions that dealt with the role of healthcare workers, currently in vogue capacity enhancement measures, and deficiencies in the healthcare setup to meet the challenges posed by pandemic-like situations. Opinions were received regarding various aspects of the capacities of healthcare workers in the district to meet pandemic-like situations.

Primary data was collected from the administrative offices of these institutions as well as through annual reports of the health department. During the field survey, I met different healthcare workers and cured patients as well as the administrators of the health facilities. Their opinions regarding this topic have been included.

Most information was collected from the district hospital Pulwama and sub-district hospitals of Tral, Rajpora, and Pampore of the Pulwama district. Data from some of the hospitals are available as secondary data over the internet in their annual reports published yearly by the Directorate of health services. Some of the hospital data were collected after personally visiting the hospital's administrative offices, and the data collected from them is used for calculating the above parameters.

After collecting the data through questionnaires, it is transformed into google questionnaires and then compiled in Microsoft Excel. Various tables and figures are drawn to interpret different data sets. It is illustrated in figure 3.1

Fig3.1 Research framework of the study



Source: The author illustrated

As we tried to analyze the whole research topic through the service delivery to patients, we had to collect information regarding various aspects, such as the quality of services provided at healthcare institutions. The concept of service is elusive or ethereal. (Bitner et al.1994) Service quality is described in terms of the consumer's overall perception of the organization and its services relative superiority or inferiority. (Cronin &Taylor,1992) view service quality as a mentality that reflects an overall long-term assessment. (Parasuraman et al.1985) defines service quality as the difference between what customers expect from a certain service provider

and what they receive. Service quality is defined. The primary element in distinguishing services and creating competitive advantage has been defined as service quality. Since all organizations compete to some extent based on service, comprehending, assessing, and enhancing is a difficult job for all of them. (Taner and Antony, 2006). Customers find it more challenging to assess service quality than product quality because services have four characteristics: intangibility, diversity, perishability, and inseparability. Because of the high credibility component involved, evaluating healthcare services is much more challenging.

Medical professionals have been tasked with creating healthcare quality standards, which have been defined in terms of the technical aspects of care delivery or the outcomes of that care. (Andaleeb, 2000). Nevertheless, during the past two decades, functional quality—a patient's assessment of quality—has increasingly been essential and has become the primary element affecting a patient's perceptions of quality. Technical or medical quality is therefore described as the accuracy of diagnoses and procedures carried out in accordance with experts' recommendations, while functional quality is how the service is rendered to the client (Lam, 1997). Because functional quality significantly impacts patient satisfaction and loyalty, a hospital must pay attention to clinical and functional quality.

(Parasuraman et al.,1985) analyzed the factors affecting service quality and created a GAP model, which offers a crucial framework for describing and evaluating service quality. Quality of service is a vague and elusive idea based on the discrepancy between performance and expectations along many service quality criteria. (Parasuraman et al., 1985). Parasuraman et al. (1988) created the SERVQUAL 22-item instrument to measure consumer perceptions of service quality in retail and service organizations. The studies of Sasser et al. served as the conceptual basis for SERVQUAL, which the authors developed. (1978); Grönroos (1982); Lehtinen and Lehtinen (1982) and their work on service quality in 1985. They developed and improved the various scale to measure the service quality construct using various techniques. Their preliminary investigation showed that the parameters used by beneficiaries to evaluate the quality of the service matched ten potentially converging characteristics. These ten factors are tangibles, dependability, responsiveness, communication, credibility, security, competence, courtesy, customer understanding, and access. These ten dimensions and their descriptions served as the basic structure of the service quality domain from which items were derived for the refined SERVQUAL scale consisting of five dimensions- reliability, assurance, tangibles, empathy, and responsiveness (RATER). The creators of the scale maintain that each service

business is fundamentally based on the abovementioned five dimensions of service quality construct. Therefore, SERVQUAL can be applied to all service industries with adjustments to meet the unique requirements of the respective industry, culture, and nation. According to Carman (1990), the survey instrument created from SERVQUAL needed to be modified by adding more questions for usage in the particular industry in which it was being used.

Several writers have used the SERVQUAL instrument to assess the functional quality dimension in various service contexts (Powpaka, 1996). (Richard and Allaway, 1993). According to (Brady & Cronin 2001), the SERVQUAL instrument can be used to assess the service delivery process during the interaction between a service provider and the service user to comprehend the available quality fully. It could be challenging to assess the "what" (or technical quality) of some services. For instance, it may be challenging for a patient (a client) to assess the technical proficiency of the service providers and the immediate results from treatments. Customers depend on other measures of quality qualities connected to the method (the "how" of health care delivery) because they are unable to evaluate the technical quality (Kang and James, 2004). People would rely on qualities like dependability and empathy to evaluate the quality of healthcare services (Grönroos, 1982).

The use of SERVQUAL is regarded as appropriate since it concentrates on how the service is given, and the central goal of the current study is to evaluate or quantify the functional service quality alone (functional quality). The functional element of healthcare services was the study's exclusive focus. Questionnaires provided to the patients comprised the questions of this model as well.

Table 3.13 Various services determinants used to measure services quality under the SERVQUAL model are;

(A)Doctor's empathy
The patient's issue was carefully heard by the doctor.
The doctor shows concern.
The physician is prepared to dispel any uncertainty regarding the patient's disease.

(B) Assurance
Healthcare workers being consistently Polite during service performance.
Services Quality dimensions
Healthcare workers being able to build confidence in patients.
Healthcare workers keenly listen to patients' requests and queries.
Hospitals have patients' best interests at heart.

(C) Responsiveness
Hospital employees are always ready to help patients.
The exact timing of service delivery is conveyed to the patient.
Hospital employees being cordial whenever called.

(D) Tangibility
Hospitals are visually appealing.
Hospital premises being neat and clean.
Hospitals have enough waiting space for attendants.
The floor is clean.
Toilets and bathrooms being clean
The hospital has a regular water supply
Hospital has adequate heating arrangements
The hospital has a well-maintained canteen.
The hospital provides a complete range of services.
Hospital has a 24-hour emergency service.

(E) Efficiency
Shorter wait times before consultations.
Time for consultations is sufficient.
It is simple to make an appointment.
Tests that are advised are completed fast.

The gap between the evaluations of patient perceptions and expectations is used to calculate the service quality rating using the following formula:

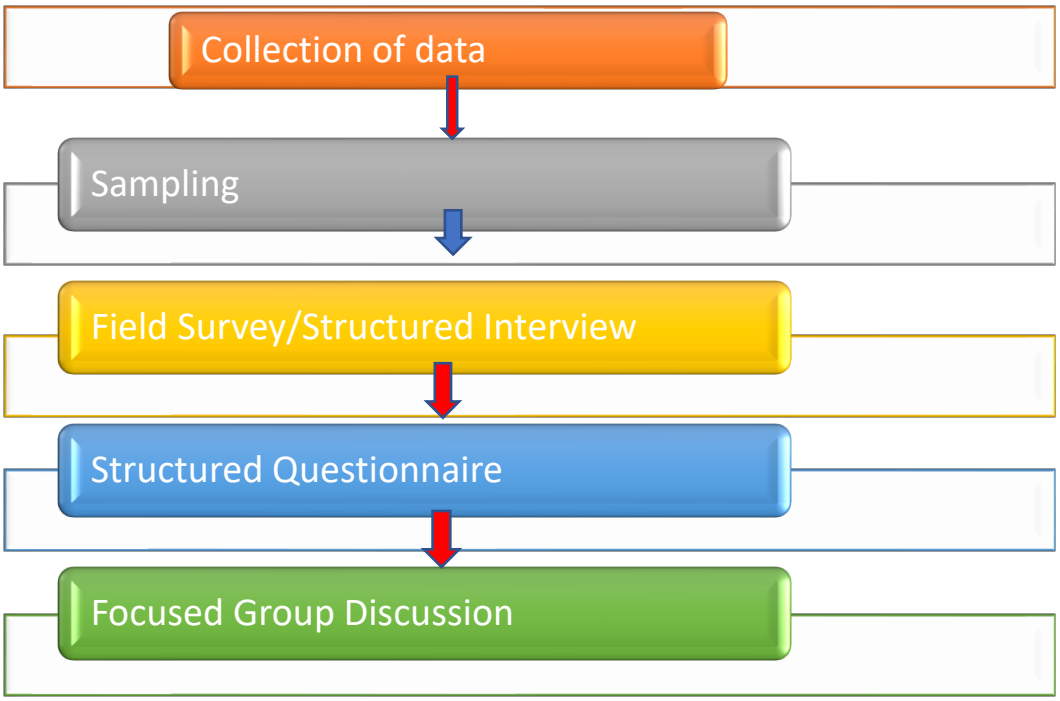
SQ = P-E, where P represents the perceived quality of the services supplied, and E represents the expected level of service quality.

For Objective first (to analyze the role of healthcare workers in the recent Coronavirus outbreak in the district Pulwama, Jammu and Kashmir), the responses of healthcare workers in the questionnaires, replies to queries during field surveys, Patient satisfaction questionnaires, and the outcomes of the Focus Group Discussion were analyzed. Various variables like positivity rate, recovery rate, the number of healthcare workers, and the institutions are analyzed.

For the Second objective (to explore the weaknesses in the present healthcare setup to make healthcare workers competent to face situations in hospitals and other institutions arising due to pandemic disease), the responses of healthcare workers in the questionnaire, replies to queries during field surveys, the Patient satisfaction questionnaire and the outcomes of the Focused group discussions are analyzed. Various variables like population, the number of healthcare workers, and the institutions are analyzed.

The third objective of suggesting policy measures for capacity building of healthcare personnel in Jammu and Kashmir, the responses of healthcare workers in the questionnaire, replies to queries during field surveys, the Patient satisfaction questionnaire, and the outcomes of the Focused group discussions are analyzed. Various variables like population, the number of healthcare workers, and the institutions are analyzed.

Figure 3.2 Research Stages



Chapter 4

Data analysis and interpretation

4.1 Data analysis and interpretations

Cleaning, inspecting, modelling, and inspecting the data are all steps in the data analysis process, which aims to retrieve the relevant information, provide a conclusion, and support a firm's decision-making. The idea of data analysis can be viewed from many different perspectives, and it employs various methods to analyze the collected data (Denzin, N. K. et al., 2011). The data analysis phase of a research project is vital because it allows the researcher to analyze both quantitative and qualitative data collected for this purpose (Creswell, 2013). The instruments used for data analysis are selected based on the data being gathered. The researcher chooses the data analysis tools that are best for the study based on the data that have been gathered. Quantitative data analysis also makes use of a variety of statistical tools. This is so that the audience can understand the numerical data that was gathered, which needed to be transformed into charts and graphs.

4.1.1 Data analysis

In this chapter of the research study, the emphasis is on analyzing the data to meet the objectives of this study.

As per the Health Department records, more than nine hundred paramedical/managerial/Non-Gazetted personnel are working in the district. Along with the District TB Center at Keller, there is a District Hospital and three Sub District Hospitals in Pampore, Tral, and Rajpora. Despite the fact that the district has a number of healthcare facilities, the divisional government classified District Hospital Pulwama as a COVID Special Care Facility. Patients from the Pulwama district and the neighbouring areas are treated there. There are more than fifty wards available for patient services indoors. For COVID patients who were admitted, more than thirty wards had been made aside. The hospital has been equipped with wards for both paediatric and maternal intensive care units. There are currently more than 18 consultants, 20 specialised medical officers, 16 medical officers, and other paramedical employees employed. Initial shortages of several pieces of equipment existed at the hospital. But these problems were quickly fixed. The availability of strong masks and PPE kits was sufficient. PPE (Personal Protective Equipment) comes in hundreds of different types. There are 681 oxygen concentrators, 531 oxygen cylinders, and 195 oxygen-supported beds among the district's

facilities and other equipment types. In the area, there is a 3300 LPM oxygen plant. A RT-PCR lab has been established at Pulwama District Hospital.

4.1.2 Software and other tools requirements

The data collected from various sources are analyzed through Microsoft Excel. Google forms are used to get the primary information as well as to analyze it.

4.2 Selection of determinants

4.2.1 Total Patients

Up to 13th February 2022, the number of patients diagnosed with COVID-19 was 18,398. Almost all the patients were treated at District Hospital Pulwama. Less than 100 patients with other comorbidities were referred to Shri Maharaja Hari Singh Hospital and Sheri Kashmir Institute of Medical Sciences, Srinagar.

4.2.2 Patients Recovered

Among the patients visited, the number of patients recovered where 18,109. In Pulwama, 5609 patients recovered. In Block Pampore, the patients recovered were 5961. In Block Tral, 4051 patients recovered; in Block Rajpora, the recovery figures were 2488. The percentage of recovered patients in the whole district was 98.42%.

4.2.3 Patients Died

The number of patients who died after being severely affected by COVID-19 till date is 289. 93 patients died in Block Pulwama, 78 in Block Pampore, and 60 and 58 in Block Tral and Block Rajpora, respectively.

4.2.4 RT-PCR and other tests

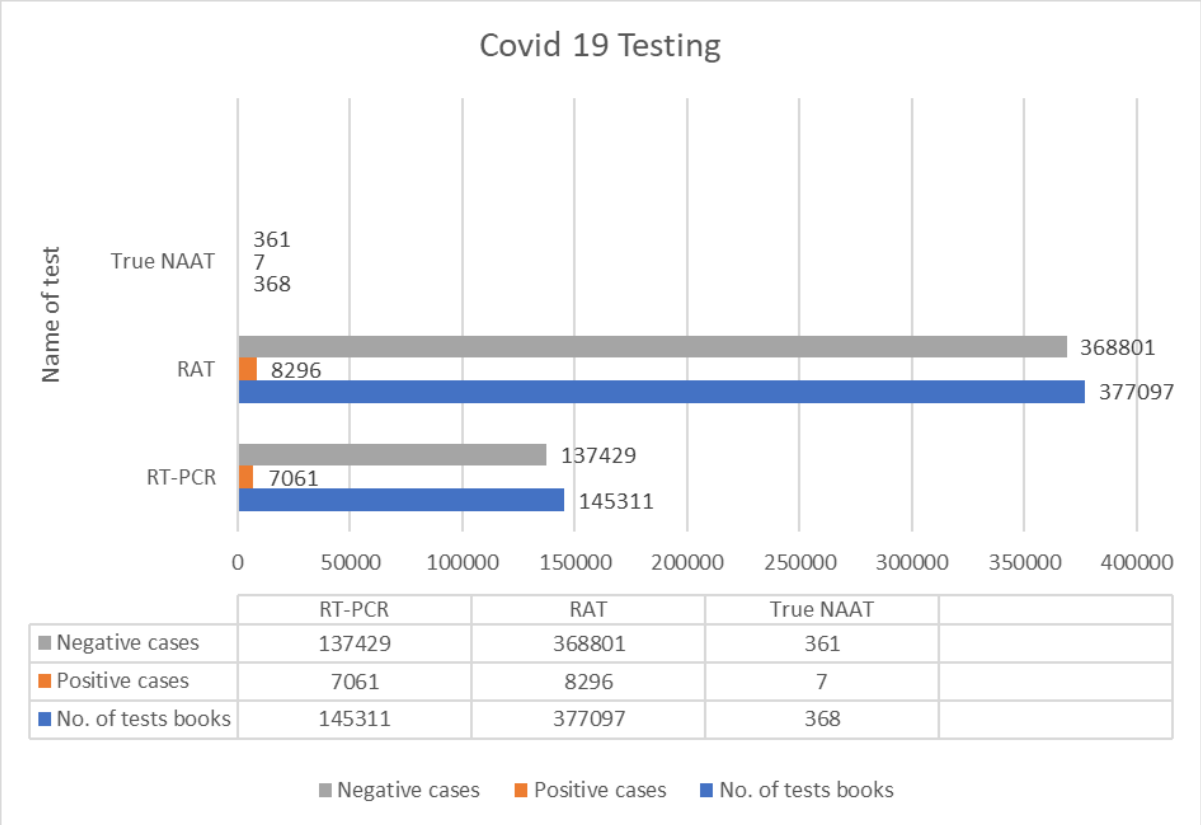
Up to 16th September 2021,145311 RT PCR tests,377097 RAT tests, and True NAAT 368, totalled 522776 at laboratories situated at various health institutions in the district. Sometimes the samples are collected here and sent outside the district for analysis

Table 4.1 COVID-19 Sampling status till 16th September 2021 in District Pulwama.

s.no	Particulars	category	No. of tests	Positive cases	Negative cases	Results awaited	Today's positive cases		
1	Total tests are done to date	RT-PCR	145311	7061	137429	821			
								Pulwama	0
		RAT	377097	8296	368801	0		Pampore	7

		True NAAT	368	7	361	0	07	Tral	0
			522776	15364	506591	821		Rajpora	0

Figure 4.1 COVID-19 Testing



4.2.5 Beds, ventilators, and other vital equipment

There are 580 beds in 10 isolation and quarantine facilities in the district. These facilities also provided 223 oxygen-supported beds, 531 oxygen cylinders, and 86 oxygen concentrators. There is the provision of 10 general ICU Beds and 15 COVID maternity beds.

Table 4.2 Isolation and quarantine facility in the district

S.No	Name of facility	category	Bed capacity	Oxygen supported beds	Oxygen cylinders	Oxygen concentrators	Covid patients admitted	ICU Bedded	COVID Maternity beds
1	District Hospital	Isolation	155	140	331	32	0	10	15

2	NTPHC Koil	CHC	40	11	81	14	0	0	0
3	NTPHC Samboora	CHC	30	11	25	9	0	0	0
4	NTPHC Nehama	CHC	20	6	11	5	0	0	0
5	NTPHC Bathnoor	CHC	30	10	20	0	0	0	0
6	NTPHC Noorpora	CHC	50	15	26	5	0	0	0
7	Govt. Girls Hostel Koil	CCC	90	0	8	2	0	0	0
8	Govt Girls Hostel Tral	CCC	110	0	0	0	0	0	0
9	Al Noor Model School	CHC	25	2	6	2	0	0	0
10	Drug de-addiction centre Tral	CCC	30	28	23	17	0	0	0
Total			580	223	531	86	0	10	15

Source: Deputy Commissioner Office Pulwama

NTPHC; New Type Health Centre

CHC; Community Health Centre

Figure 4.2 Infrastructure availability regarding COVID-19 management.

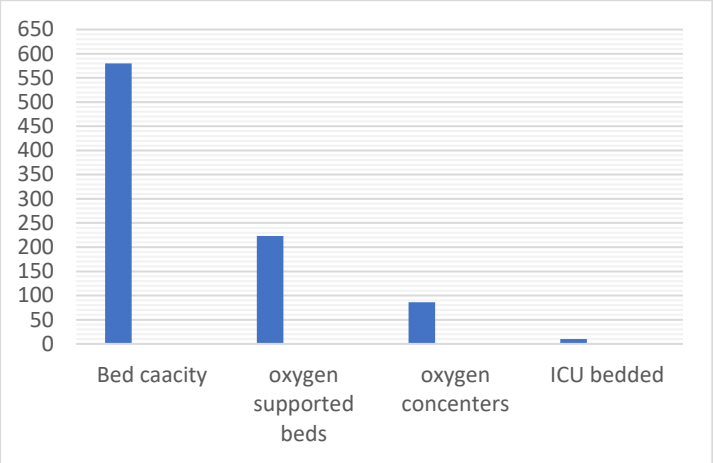


Table 4.3 Statistics regarding COVID-19 Management in Pulwama

1	Tests per million population	788366.4						
2	Positive cases per million population	23169.5	Pulwama	Pampore	Tral	Rajpora		
3	Total Covid positive cases	18398	NA	NA	NA	NA	Positive rate	2.94%
4	Total recoveries	18109	NA	NA	NA	NA	R Rate	98.44%
5	Total Covid deaths till date	289	NA	NA	NA	NA	F Rate	1.26%
6	Total active cases	46						
7	Hospital isolation	2						
8	Defence personnel	0						
9	Active cases home isolated	46	13	13	12	8		

Source: CMO Pulwama

4.2.6 Vaccinations

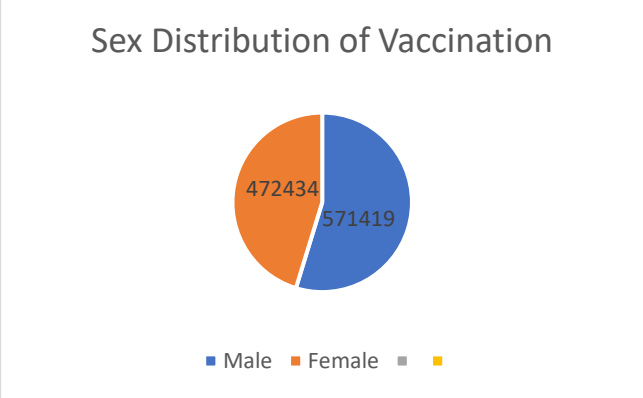
Covishield and Covaxin are the two vaccines used in the district. Total vaccination doses as per COWIN till 4 PM. on 11th August 2022 are 10,74,938 which includes 5,08,847 first dose,5,34,908 second dose and 31,183 precaution doses. There are 48 vaccination centres. More than 95% of the population in the district is fully vaccinated.144857 doses were provided to citizens who were more than 60 years old.229542 doses to the age group of 45 to the 60-year group. 562221 doses to the 18–45-year age group. For the 15-17 age group, 82314 doses have been given. 52862 doses were given to the 12–14-year age group. Age-specific vaccination status is shown in Table 4.2

Table 4.4 **Vaccinations for different Age groups**

Age Group	Number of Vaccines
12-14 year	52862
15-17 years	82314
18-45 years	562221
45-60 years	229542
Over 60 years	144857

571419 doses were provided to the males, and 472434 doses were given to females, represented by the pie chart in figure 4. below.

Fig 4.3 Vaccination among men and women



928479 Covishield doses,93597 doses of Covaxin, and 52862 doses of Corbevax vaccines were used in the district, which is represented as follows.

Table 4.5 Different vaccines used in the district

Vaccine	Quantity
Covishield	928479
Covaxin	93597
Corbevax	52862

4.3 The Responses of Patients

Data collected from the questionnaire provided to the COVID-19 patients are tabulated under different themes presented as follows:

Efficiency:

Information about Doctor availability

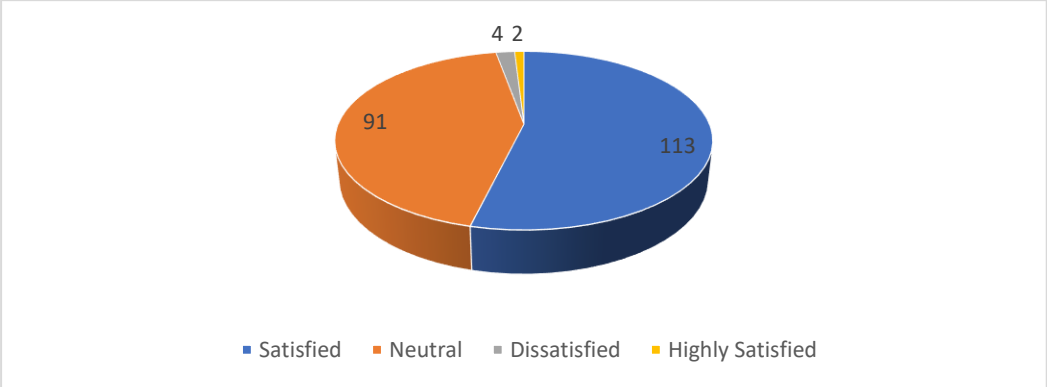
With the information about the availability of doctors, which falls within the efficiency aspect of healthcare,

Table 4.6 Information about Doctor Availability

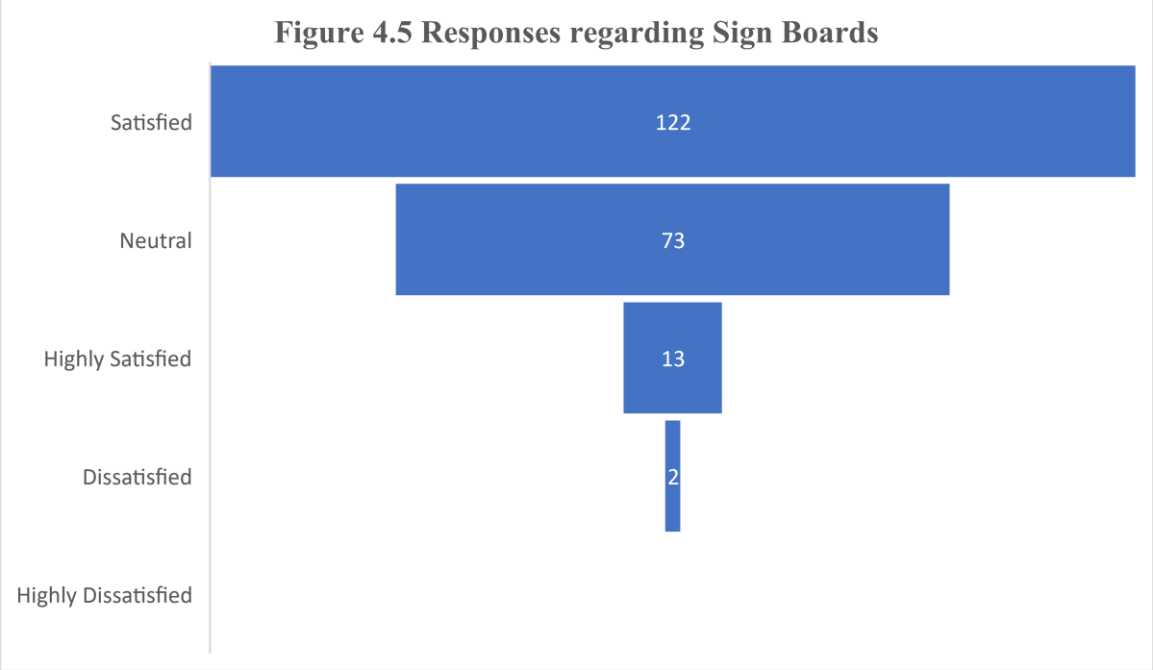
Responses	Number
Satisfied	156
Neutral	43
Dissatisfied	7
Highly Satisfied	2
Highly Dissatisfied	2
Total	210

Regarding the system at registration counters to make an appointment, 113 were satisfied, 91 were neutral, 4 Dissatisfied, and 2 were Highly Satisfied. It is shown in Figure 4.4

Figure 4.4 Responses regarding the Registration System



Regarding sign boards and other methods to denote different facilities,13 were highly satisfied,122 satisfied,73 neutral, and two were dissatisfied. It can be displayed in Figure 4.5



Regarding the waiting time and check-up, 98 participants were neutral, 97 were satisfied, nine were dissatisfied, and six highly satisfied. It is shown below in Table no 4.7

Table 4.7 Waiting time between appointment and check up

Response	Number
Neutral	98
Satisfied	97

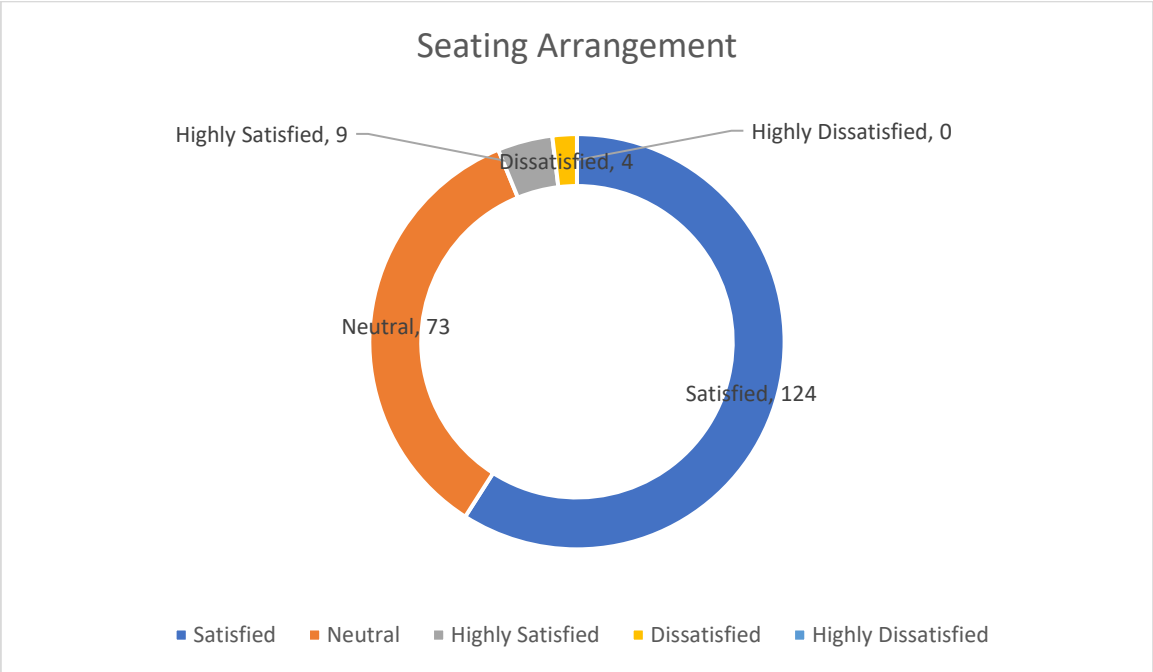
Dissatisfied	9
Highly Satisfied	6
Highly Dissatisfied	0
Total	210

Tangibility:

Availability of chairs in the waiting area

Out of 210 participants,124 were satisfied, nine were highly satisfied,73 were neutral, four were dissatisfied, and 0 were highly dissatisfied. It is represented in figure 4.6 below.

Figure 4.6 Responses regarding seating arrangement



Regarding the availability of cooling appliances in the waiting area, the participants responded as in Table 4.8

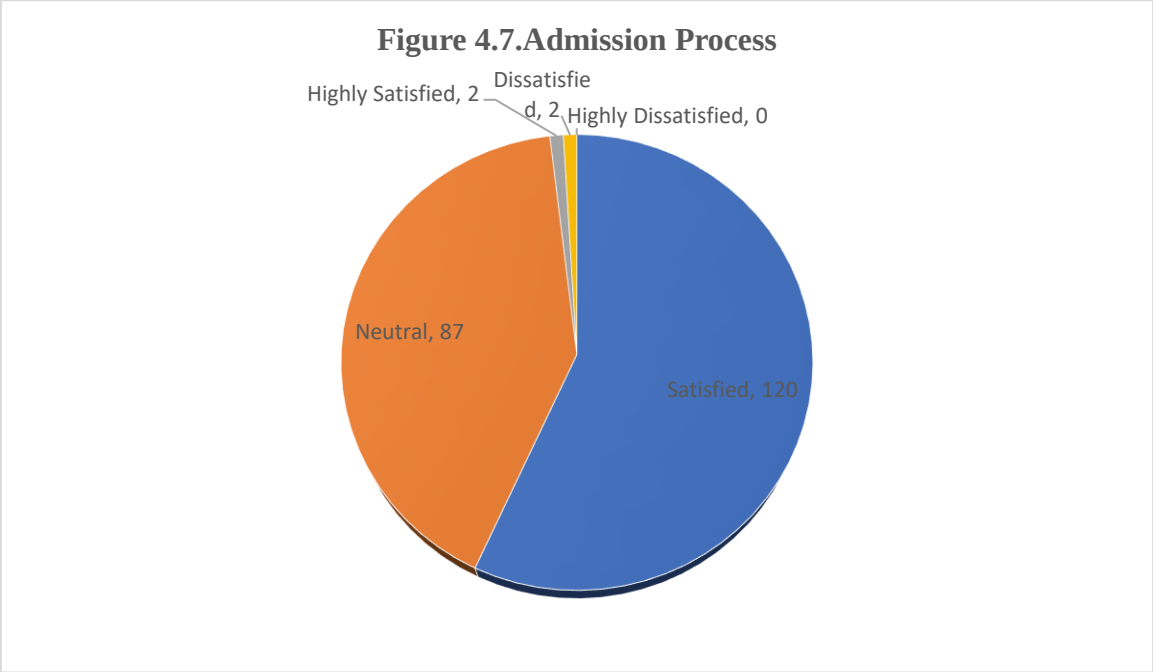
Table 4.8 Responses regarding cooling appliances

Response	Number
Satisfied	121
Neutral	77

Highly Satisfied	6
Dissatisfied	6
Highly Dissatisfied	0
Total	210

Process of admission in the hospital

Concerning the admission process adopted in various hospitals, the respondents gave their responses .120 participants were satisfied, 87 neutral, two highly satisfied, and one was dissatisfied. The collected responses are presented in figure 4.7



Regarding the availability of the prescribed medicines in the hospital, the responses collected are as follow in Table 4.9

Table 4.9 Availability of medicines in the hospitals.

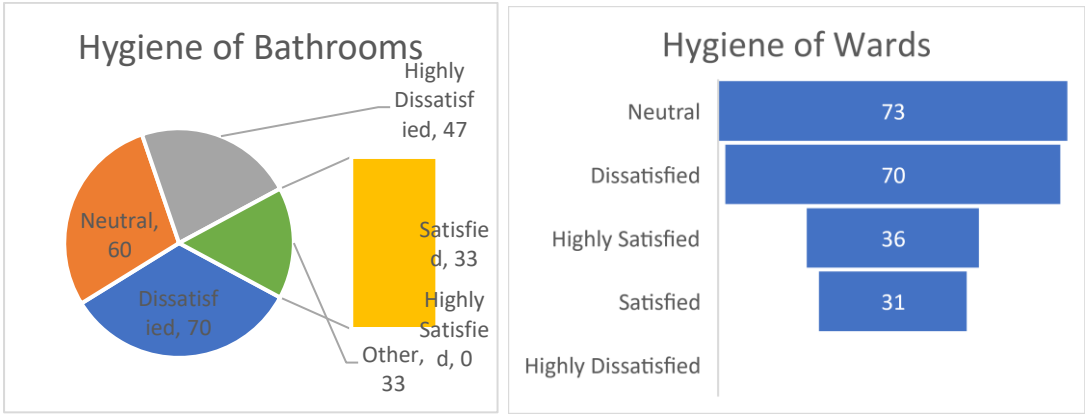
Response	Number
Neutral	128
Satisfied	69
Dissatisfied	8
Highly Satisfied	3

Highly Dissatisfied	2
Total	**210**

Hygiene of bathrooms and toilets

Regarding the hygiene maintained in the bathrooms and toilets of the hospitals, the following responses were got.70 were dissatisfied,60 were neutral,47 were highly dissatisfied,33 were satisfied, and 0 were highly satisfied. It can be represented by figure 4. as follows. Responses related to the hygiene of wards were 73 neutral,70 dissatisfied,36 highly satisfied, 31 satisfied, and 0 highly dissatisfied. This is shown in figure 4.8

Figure 4.8 Hygiene of bathrooms, toilets, and wards



Concerning the availability of Drinking water on the premises of the healthcare facility, the following responses were collected. These are represented in Table 4.10 as below.

Table 4.10 Availability of drinking water

Response	Number
Neutral	74
Dissatisfied	58
Satisfied	53
Highly Dissatisfied	25
Highly Satisfied	0
Total	**210**

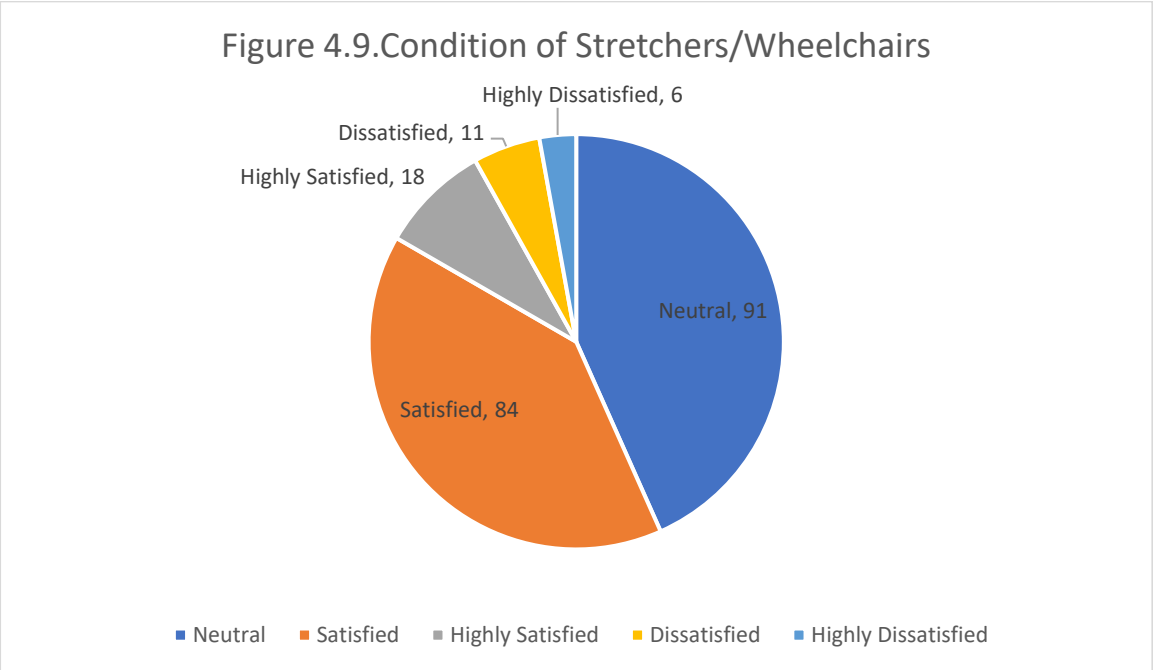
Cleanliness of bed sheets, pillows, and other material

Bed sheets and other clothing form an essential aspect of patient healthcare. The respondents gave their responses regarding this aspect of the healthcare facilities. In Table 4.11, the responses are analyzed

Table 4.11 Cleanliness of Bedding material

Response	Number
Dissatisfied	75
Neutral	72
Highly Dissatisfied	35
Satisfied	26
Highly Satisfied	2
Total	210

Responses regarding the condition of stretchers and wheelchairs are analyzed.91 were neutral,84 satisfied,18 were Highly satisfied,11 were dissatisfied, and six were highly dissatisfied. It is represented in Figure 4.9 as below.



The participants responded in the following manner regarding the Ambulance services and emergency services.

Table 4.12 Responses about Ambulance services

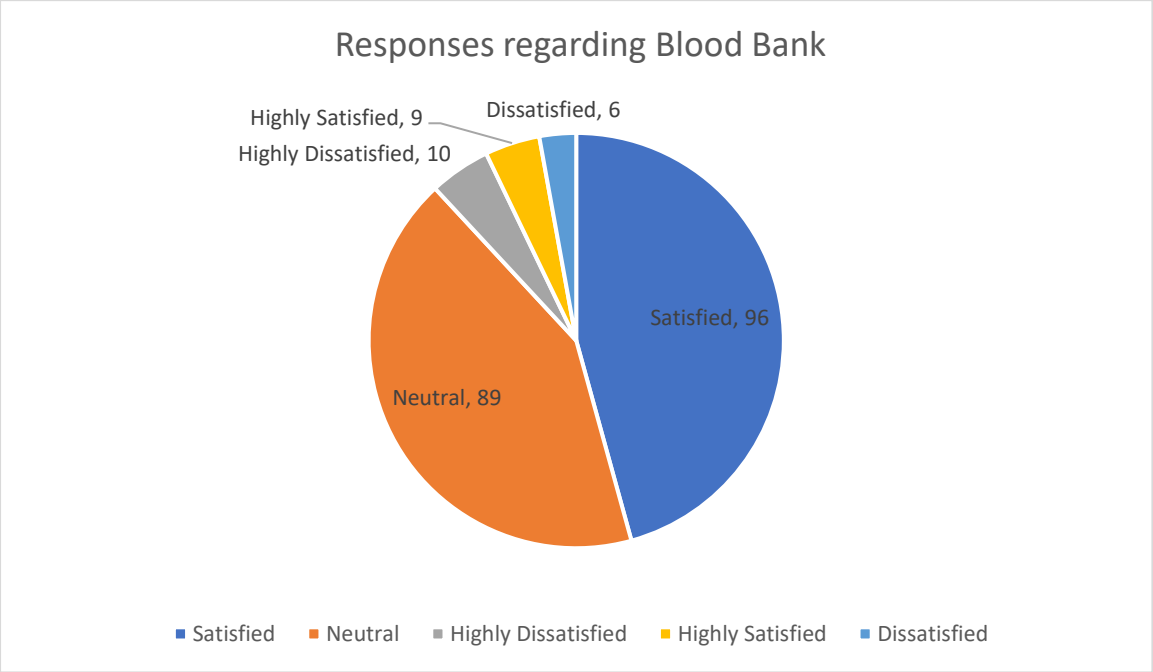
Ambulance services	Number
Satisfied	100
Neutral	81
Highly Satisfied	26
Dissatisfied	3
Highly Dissatisfied	0
Total	210

Table 4.13 Responses regarding Emergency services

Emergency services	Number
Satisfied	127
Neutral	67
Highly Satisfied	12
Dissatisfied	4
Highly Dissatisfied	0
Total	210

Concerning the Blood bank facility, 96 were satisfied, 89 were neutral, ten were highly Dissatisfied, nine were highly dissatisfied, and six were dissatisfied. It is illustrated in figure 4.10

Figure 4.10 Responses regarding Blood Bank



Responses regarding the Quality of food provided in the canteen are tabulated in Table 4.14 as follows

Table 4.14 Responses regarding the quality of food at the canteen

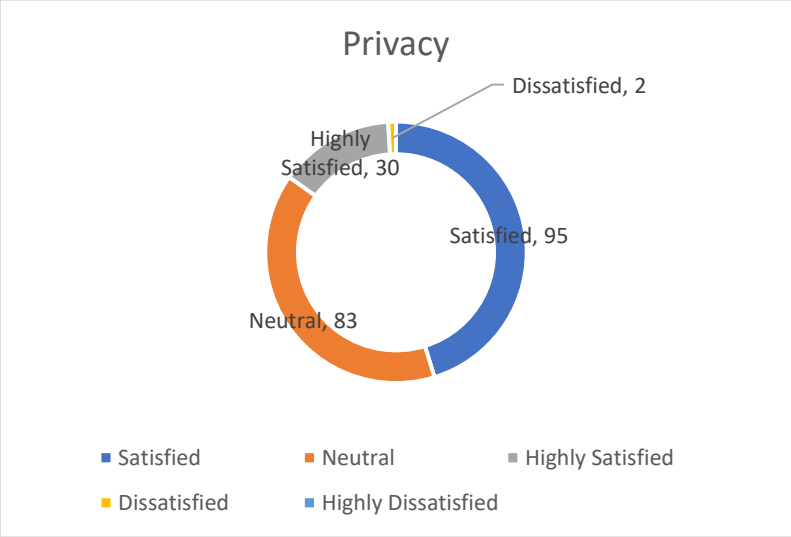
Food Quality in the Canteen	Number
Neutral	105
Satisfied	91
Highly Satisfied	6
Dissatisfied	5
Highly Dissatisfied	3
Total	210

Assurance:

Concern for Privacy

Out of 210 participants, 95 were satisfied, 83 were neutral, 30 were highly satisfied, two were dissatisfied, and 0 highly dissatisfied. This data is shown graphically as follows in Figure 4.11

Figure 4.11 Privacy Concerns in Hospital



Responsiveness

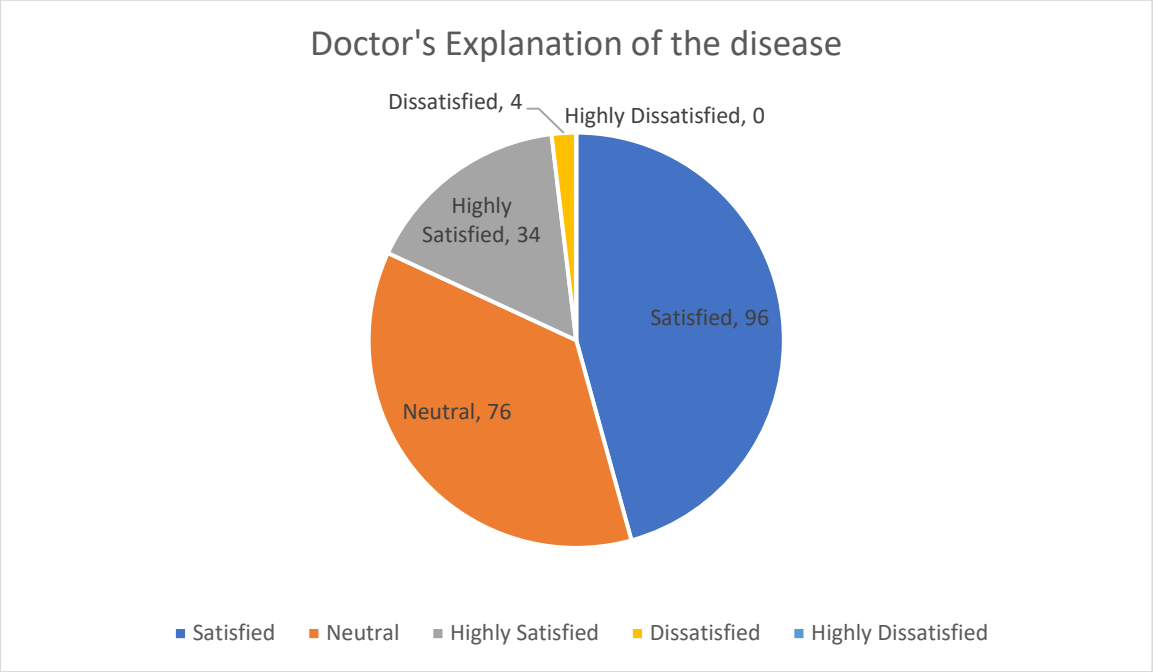
Regarding the Courtesy and respect given by the doctor,104 were satisfied,90 were neutral,13 highly satisfied, and three were dissatisfied. It is represented in Table 4.15 as below.

Table 4.15 Courtesy and Respect

Response	Number
Satisfied	104
Neutral	90
Highly Satisfied	13
Dissatisfied	3
Total	210

Regarding the explanation by the doctor about the COVID-19 disease, 96 were satisfied, 76 were neutral, 34 were highly Satisfied, 04 were Dissatisfied 0 were highly dissatisfied. This data is represented graphically in Figure 4.12

Figure 4.12 Responses regarding the Doctor's explanation of the disease

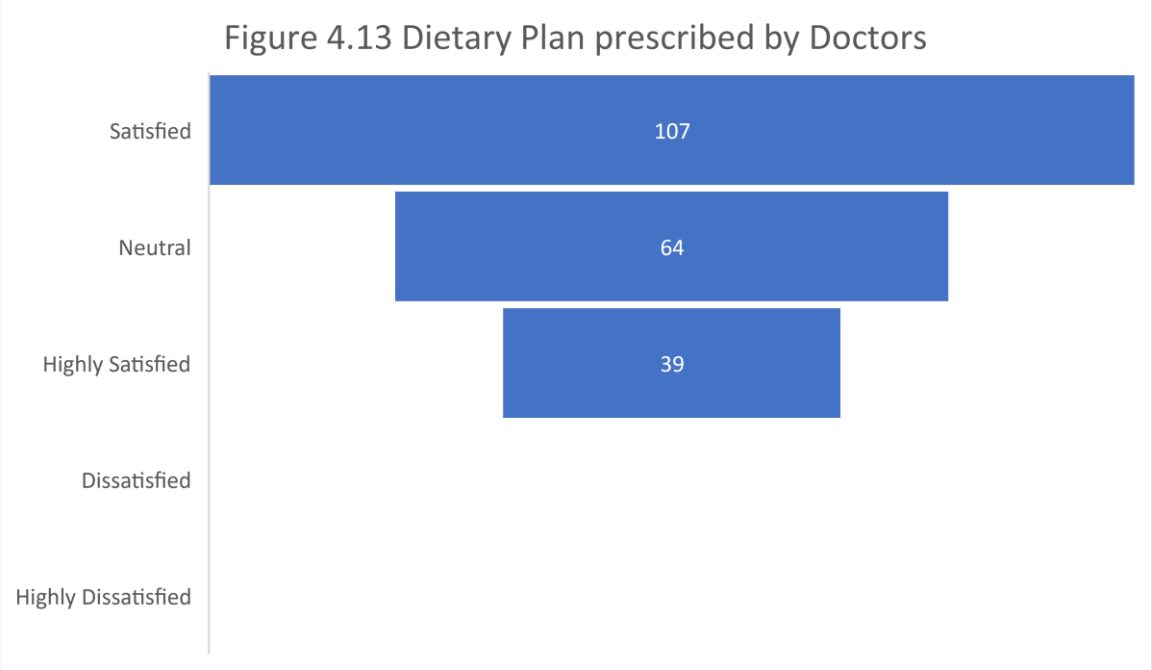


Regarding the explanation by the doctor about medicines, the responses have been tabulated as follows in Table 4.16

Table 4.16 Doctor's Explanation regarding medicines

Response	Number
Neutral	89
Satisfied	84
Highly Satisfied	33
Dissatisfied	3
Highly Dissatisfied	1
Total	210

During their stay in the healthcare facility, food was provided within the facility itself. Responses of the participants regarding the dietary plan prescribed by the doctor are as follows.107 were satisfied,64 were neutral,39 were highly satisfied,0 dissatisfied, and 0 highly dissatisfied.



Availability of the nurses in the ward

Regarding the availability of nurses, the participants' responses were as shown in Table 4.17 below.

Table 4.17 Availability of the nurses in the ward

Response	Number
Neutral	99
Satisfied	94
Highly Satisfied	15
Dissatisfied	2
Highly Dissatisfied	0
Total	210

Responses regarding the quality of care provided by nurses in shown in Table 4.18

Table 4.18 The care given by nurses

Response	Number
Satisfied	103
Neutral	97
Highly Satisfied	8
Dissatisfied	2
Highly Dissatisfied	0
Total	210

The courtesy shown by the laboratory technician:

Concerning the behaviour of the laboratory technician during investigating procedures, the responses of the participants were as shown in Table 4.19

Table 4.19 Courtesy of laboratory technicians

Response	Number
Neutral	102
Satisfied	97
Highly Satisfied	8
Dissatisfied	2
Highly Dissatisfied	1
Total	**210**

Responses regarding the behaviour of paramedical staff are presented in Table 4.20 below

Table 4.20 The behaviour of paramedical staff

Response	Number
Satisfied	104
Neutral	73
Highly Satisfied	27
Dissatisfied	5
Highly Dissatisfied	1

Total	**210**

Table 4.21 Frequency of the doctor visit in wards

Response	Number
Neutral	106
Satisfied	88
Highly Satisfied	10
Dissatisfied	6
Highly Dissatisfied	0
Total	**210**

Table 4.22 Availability of prescribed medicines in medical shops inside the hospital

Response	Number
Satisfied	111
Neutral	86
Highly Satisfied	9
Dissatisfied	4
Highly Dissatisfied	0
Total	210

Table 4.23 Information about the availability of test reports

Response	Number
Neutral	118
Satisfied	76
Highly Satisfied	7
Dissatisfied	7
Highly Dissatisfied	2
Total	210

Table 4.24 Medical costs during the whole process of admission and discharge

Response	Number
Neutral	90
Satisfied	86
Highly Dissatisfied	18
Dissatisfied	13
Highly Satisfied	3
Total	210

Empathy:

Table 4.25 Responses regarding the process of paying bills

Response	Number
Satisfied	102
Neutral	84
Highly Satisfied	19
Dissatisfied	5
Highly Dissatisfied	0
Total	210

Table 4.26 Responses for Specialist doctors

Response	Number
Neutral	102
Satisfied	97
Highly Satisfied	7
Dissatisfied	4
Highly Dissatisfied	0
Total	210

Table 4.27 Follow-up/Re-check up

Response	Number
Neutral	108
Satisfied	91
Highly Satisfied	6
Dissatisfied	5
Highly Dissatisfied	0
Total	210

Table 4.28 Overall facilities in the hospital

Response	Number
Neutral	108
Satisfied	78
Dissatisfied	21
Highly Satisfied	2
Highly Dissatisfied	1
Total	210

Table 4.29 Recommending other people to avail of these facilities

Response	Number
Neutral	145
Satisfied	41
Dissatisfied	21
Highly Dissatisfied	3
Highly Satisfied	0
Total	210

4.4 Information collected from healthcare workers

Data collected through the structured interview of twenty healthcare workers and key personnel is presented as follows:

Table 4.30 COVID-19 services covered all sections of patients in your institution

Response	Number
Disagree	6
Uncertain	6
Agree	5
Strongly Disagree	3
Strongly Agree	0
Total	20

Table 4.31 Adequate publicity regarding COVID Care services

Response	Number
Uncertain	11
Agree	5
Strongly Agree	3
Disagree	1
Strongly Disagree	0
Total	20

Table 4.32 Achieving the goal of patient treatment satisfactorily

Response	Number
Agree	9
Strongly agree	7
Disagree	4
Uncertain	0
Strongly Disagree	0
Total	20

Table 4.33 Shortage of healthcare personnel at healthcare institutions

Response	Number
Uncertain	11
Agree	8
Strongly agree	1
Disagree	0
Strongly Disagree	0
Total	20

Figure 4.14 Responses regarding the shortage of Healthcare Personnel

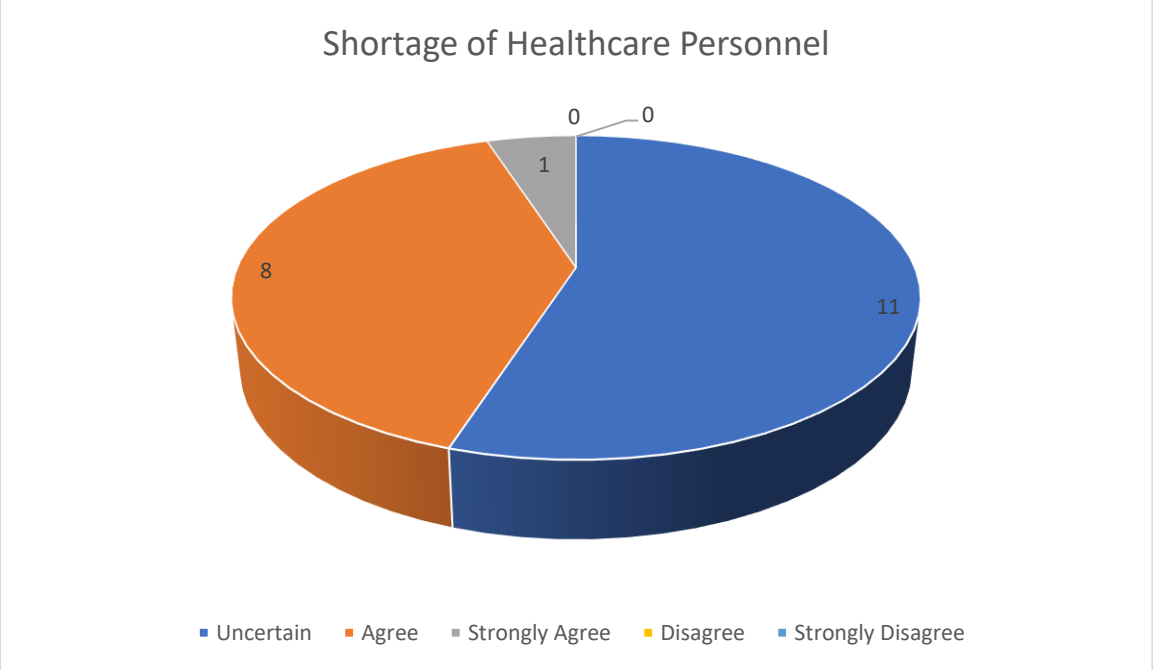


Table 4.34 Prompt and effective treatment for patients

Response	Number
Agree	19

Disagree	1
Uncertain	0
Strongly Agree	0
Strongly Disagree	0
Total	20

Table 4.35 In-service education program for healthcare personnel is inadequate

Response	Number
Agree	10
Uncertain	5
Strongly agree	5
Disagree	0
Strongly Disagree	0
Total	20

Table 4.36 Medicine, which was out of stock, is made available in time.

Response	Number
Agree	11
Uncertain	8
Disagree	1
Strongly Agree	0
Strongly Disagree	0
Total	20

Table 4.37 Shortage of materials like medicines & equipment was the main barrier to effective treatment.

Response	Number
Agree	11
Strongly Agree	6
Disagree	2
Uncertain	1
Total	20

Table 4.38 Administrative and managerial issues affected the working environment

Response	Number
Agree	9
Disagree	6
Uncertain	4
Strongly agree	1
Strongly Disagree	0
Total	20

Figure 4.15 Administrative/Managerial issues during COVID-19

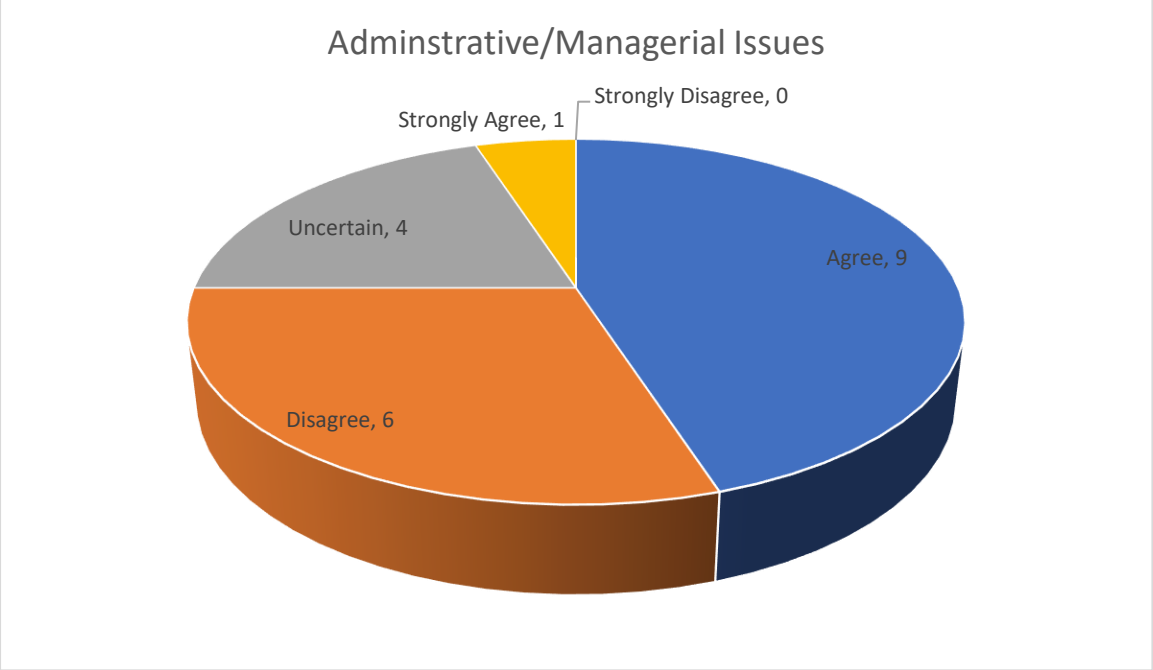


Table 4.39 Working hours are more than usual

Response	Number
Agree	11
Strongly agree	8
Disagree	1
Strongly Disagree	0
Uncertain	0
Total	20

Table 4.40 Maintenance of records for Indoor and Outdoor patients was accurate.

Response	Number
Agree	10
Uncertain	8
Strongly agree	2
Disagree	0
Strongly Disagree	0
Total	20

Responses about Capacity-building activities of health care personnel during service are ineffective in terms of content and duration.

Table 4.41 Ineffective Capacity building measures

Response	Number
Agree	13
Uncertain	5
Disagree	1
Strongly agree	1
Strongly Disagree	0
Total	20

Table 4.42 The heavy workload on healthcare personnel

Response	Number
Strongly agree	12
Agree	7
Uncertain	1
Disagree	0
Strongly Disagree	0
Total	**20**

Table 4.43 Satisfaction with the salary as per the working conditions

Responses	Number
Agree	8
Disagree	8
Strongly Disagree	4
Strongly Agree	0
Uncertain	0
Total	20

Table 4.44 Regular supervision and training of health care personnel at the workplace

Response	Number
Agree	12
Uncertain	6
Disagree	1
Strongly agree	1
Strongly Disagree	0
Total	20

Table 4.45 Coordination among various departments of the hospital

Response	Number
Agree	14
Strongly agree	5
Uncertain	1
Disagree	0
Strongly Disagree	0
Total	20

Table 4.46 Coordination of the hospital with other government departments

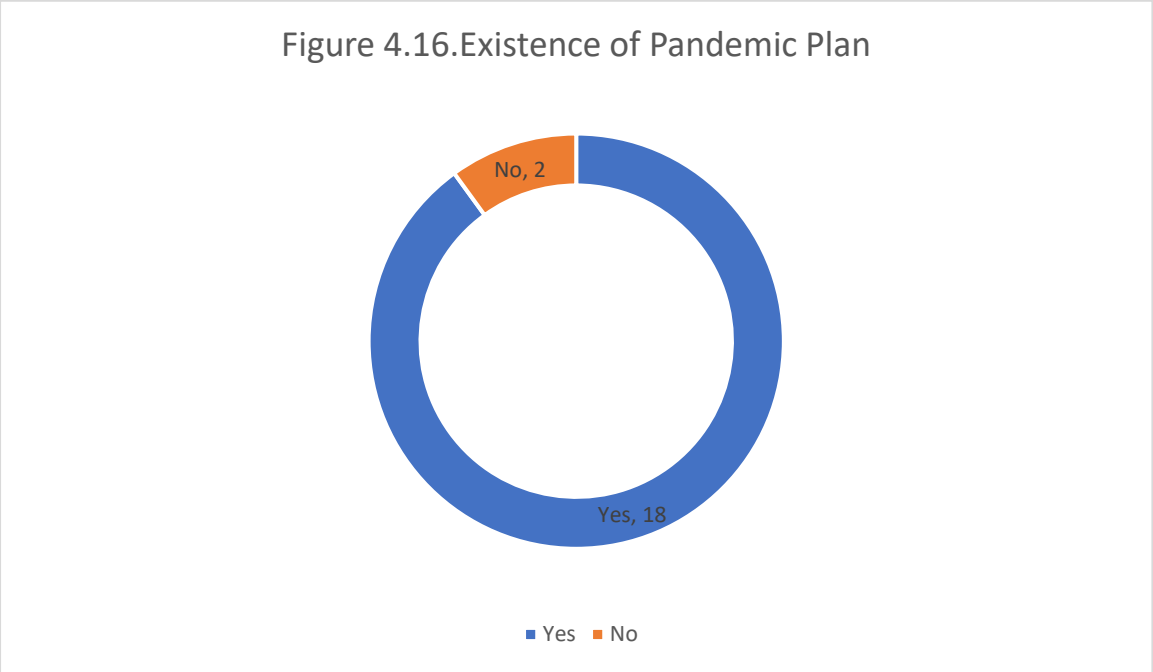
Response	Number
Agree	11
Uncertain	8
Strongly agree	1
Disagree	0
Strongly Disagree	0
Total	20

Table 4.47 Transport facility to pick up and drop off.

Response	Number
Disagree	12
Agree	4
Strongly Disagree	2
Strongly agree	1
Uncertain	1
Total	20

Table 4.48 Existence of plans in Healthcare facilities to deal with Pandemic situations

Response	Number
No	18
Yes	2
Total	20



4.5 Focus Group Discussion

During Focus Group Discussion about capacity building, role, and required policy measures in the health sector in Pulwama to meet Coronavirus outbreak-like situations, the required information in the form of various opinions was collected. Regarding the information gathered through this tool, Colaizzi's method was used to analyze the data. This process has various steps (Sanders, 2003; Speziale & Carpenter, 2007).

1. To get a sense of the entire transcript, each transcript should be read several times.
2. Important sentences relating to the studied phenomenon should be taken from each transcript. These declarations must be written down on a different sheet with the pages and lines noted.
3. Interpretations should be drawn from these critical assertions.
4. Categories, topic clusters, and themes should be used to group the created meanings.

5. An in-depth description of the phenomena under research should incorporate all study findings.

6. A description of the phenomenon's fundamental structure is required.

7. To match the researcher's descriptive results with the research participants' experiences, validation of the findings should be requested from them. The Colaizzi process for analyzing qualitative data is represented by the steps below. It consists of the following steps shown in Figure 4.17.

Figure 4. 17 Data Analysis by Using Colazzi's Procedural Steps

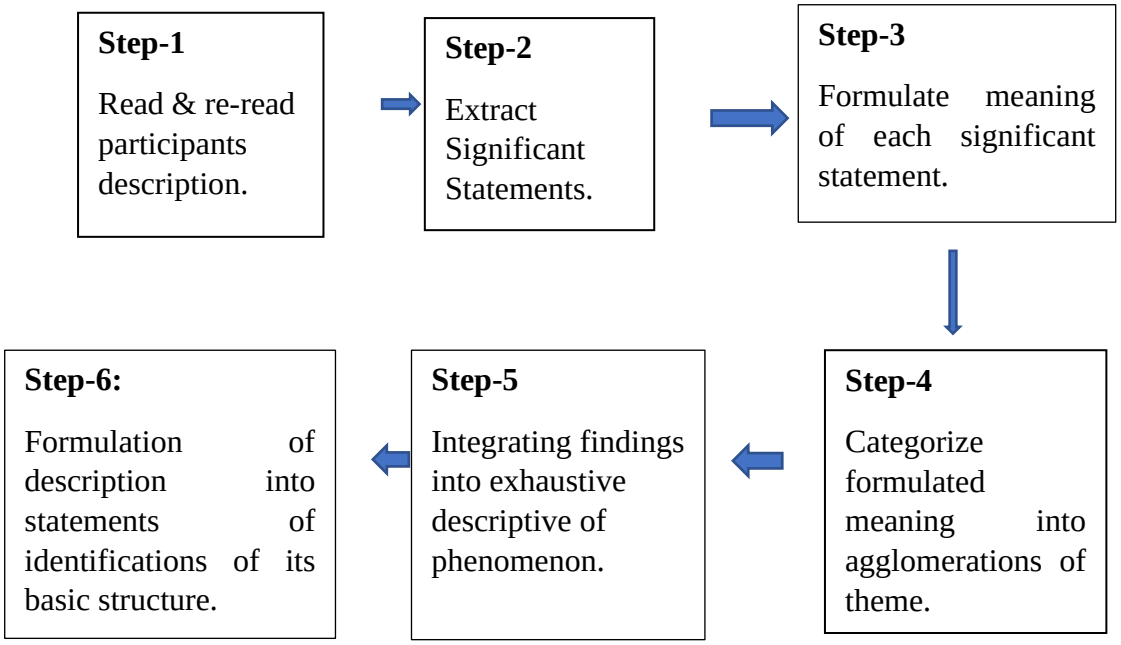


Table 4.49 Content Analysis of Focus Group Discussion data regarding capacity building of the healthcare workers in the Pulwama district.

Serial No	**Verbatim**
	Role of Healthcare workers
1	Huge demand upon public health institutions
2	Massive load on public services. Poor coordination among departments.
3	Huge patient rush. Long working hours
4	Enforcing lockdown, Contact Tracing.
5	Continuous monitoring at the Panchayat level. Multi-tasking
6	Managing a vast flow of quarantined people. Quick response to the situation
7	Mass awareness. Reluctance and misinformation.

8	Overall supervision with the whole situation arising out of COVID
9	Heavy rush with little resources
10	Rush, the reluctance of the public to imbibe COVID-appropriate behaviour
11	Going for multiple tasks which were not directly associated with our job.
12	Going for work during the outbreak.
13	Sudden colossal load of patients
14	Lack of equipment and training
15	Huge workload. Multiple role-playing.
16	Sudden patient rush. First-time experience.
17	Huge patient load. Less human resources. Lesser equipment.
18	Heavy patient rush. Little space and scarcity of manpower.
19	Huge rush. Less protective equipment.
20	Huge crowds, the newness of the disease.
21	Building the required infrastructure. Meeting the demands of the situation.
22	Nature of infection and the scarcity of resources
23	First-time situation. No coordination with the health department
24	Lesser staff and scarcity of resources
25	Less inter-departmental coordination
26	The sudden increase in working hours. Had to take the role of in charge. Quarantine centre for two months.
27	To cater to the demands of the vast population in the halqa.No sufficient infrastructure and no skilled workforce.
28	The majority of the employees faced severe problems in facing the emerging situations
29	Inadequate facilities of transport from residence to office. Less emphasis on the subordinates upon COVID-appropriate behaviour.
30	Continuous overseeing of the law and order, health, and other issues were the most significant challenges during this period.
31	Absence of necessary equipment. Infodemic
32	Control the movement of the public. Enforce lockdown
33	To enforce social distancing. Educating people
34	Informing people about the actual situation. Lack of proper information.

35	There was less information among the public regarding the same. People needed to be provided assurance.
36	Meagre resources. No practical plan.
37	Sudden lockdown. Public interaction minimisation. Lack of coordination.
38	Coordination with the health department
39	Lockdown imposition.
40	Less budgetary allocation. Infrastructural issues

Table 4.50 Existence of any policy/program regarding COVID-19 management

Serial Number	**Verbatim**
	Existence of any policy/program regarding COVID-19 management
1	To some extent, there was a regular plan but not wrt such situations
2	No
3	No
4	Yes, the police are always ready for all eventualities
5	No
6	No specific plan for the pandemic
7	No
8	There is a DM plan, but the severity and nature of the pandemic were different.
9	No
10	No
11	No
12	No
13	No
14	No
15	No
16	No
17	No, only a regular plan
18	No
19	No
20	No, it was a new virus with new nature and highly contagious.
21	No

22	No, only a regular Disaster plan
23	In the initial phases, no plan. But with the passage of time, planning was initiated
24	No, there was no such plan
25	No
26	No, it was like planning by default.
27	No, only five beds for the whole halqa
28	There was absolutely no plan to deal with such situations
29	No
30	In earlier phases, there was no prior planning.
31	No
32	No
33	No specialized plan
34	No, the lack of an existing plan was the main concern during this period.
35	No, there was no prior plan.
36	No
37	No
38	Yes, but not pandemic specific
39	No
40	This situation-specific plan was not there

Table 4.51 Staff was competent to meet the demands of COVID Management

Serial Number	**Verbatim**
	The staff was competent to meet the demands of COVID Management
1	No, prima facie deficiency in training and other skills of the healthcare personnel.
2	To some extent, skillsets are not updated.
3	No
4	We were fully competent.
5	The lack of skills was visible
6	There is scope for improving the skills of the staff
7	No

8	No
9	Yes, but specializations were missing
10	No
11	No
12	Yes, but the situation was scary
13	Yes
14	Yes, but needs more training
15	Yes, still there is the scope for improving the existing skillsets.
16	No, formal training is being provided. Nevertheless, needs new and sophisticated training.
17	No
18	Yes, but a lot more needs to be done.
19	To some extent. But specialized competencies missing
20	To some extent, no specific training was there
21	No
22	This pandemic needed specialized personnel
23	No, there was no proper employee training to deal with the whole issue.
24	We were caught unawares
25	No
26	No, particularly non-health department employees
27	No
28	As COVID was a new virus, the staff was not fully competent to meet the needs of the situation
29	No
30	Honestly, the staff was found lagging behind in the required skills.
31	Yes, but needed more refined training
32	No
33	No, there was apparent mismanagement
34	The staff was not competent as COVID was sudden
35	The staff was caught unawares. In the governance set-up, there was less emphasis on capacity building
36	To some extent
37	No

38	No
39	No
40	The staff was not competent. They needed more skills

Table 4.52 How to enhance the capacities of Healthcare workers.

Serial Number	**Verbatim**
	How to enhance the capacities of Healthcare workers.
1	There is a need for capsule programs to meet situations of such a nature.
2	Yes, employees to be provided training regarding such situations
3	Yes, paramedical staff need to be sensitized about such situations.
4	Rehearsal and drills to remain in a state of readiness
5	Yes, to have a robust workforce, there is a need to have a trained cadre of employees in every department
6	Yes, with continuous evaluation.
7	Employees need to be provided with continuous training.
8	Yes, continuous training and evaluation of its outcomes
9	Yes, enhance the incentives for new training
10	Yes, regular in-house training needs to be provided
11	Yes, there is a need to adopt best practices from other parts of the world.
12	Yes. A separate task force is to be made for monitoring training.
13	Yes, modernization of training is the need of the hour
14	Yes, to make them more capable
15	Yes, selecting employees to undergo new training regarding the pandemic.
16	Yes, dummy exercises should form part of the whole health governance.
17	Yes, special training sessions are to be conducted for the employees to deal with pandemic situations
18	Yes, rigorous refresher courses for in-service employees.
19	Yes, Special courses need to be there to meet the pandemic situations.
20	Yes, continuous capacity-building measures are to be taken.
21	Yes, they need a new skill set to deal with such situations
22	Yes, there is a need for specialized training for the personnel handling disaster-like situations.
23	Yes, indeed, there is a need for continuous training.

24	Yes, there is a strong need for a rigorous training program for all employees
25	Yes, comprehensive measures aimed at improving training
26	Yes, there is a need to enhance the skillsets of all employees to meet such situations.
27	Yes, enhance the skills of the employees.
28	Yes, there is an absolute necessity of going for regular capacity enhancement of the employees
29	Yes
30	Yes, continuous departmental training courses need to be made a regular part of the services.
31	Yes, continuous training is needed to deal with such situations
32	Yes, there is a need to enhance the training modules
33	Yes, training the employees for special circumstances
34	There is a need for capacity building. Proper training.
35	Yes, a skilled workforce is the need of the hour. Proper and planned training
36	Rigorous training with continuous evaluation
37	Yes, there is a need to have a trained cadre.
38	Yes, Continuous departmental training courses
39	Yes. Proper capacity-building measures in the form of better training.
40	Yes, departmental training programs need to be made regular.

Table 4.53 Policy suggestions for future

Serial Number	**Verbatim**
	Policy suggestions for future
1	Training enhancement. Infrastructure upgradation.
2	Improved training and enhanced infrastructure.
3	Recruit more doctors and paramedics. Enhance infrastructure.
4	More refresher courses. Improved coordination with other departments. Enhancing working conditions of police personnel.
5	Enhanced training. Build quality infrastructure. Have a dynamic policy.
6	Robust infrastructure. Training the employees to deal with situations like COVID.
7	Increased facilities of healthcare.

8	Infrastructure and manpower. Increased inter-departmental coordination.
9	More allocation for such situations.
10	Mass media awareness. Infrastructure building along with modern training.
11	Infrastructure and human resources need to be made ready for uncertain situations.
12	Grassroots level improvement in health infrastructure. Training with outcomes
13	Infrastructure development. Capacity building of the personnel.
14	Infrastructure and training enhancement. More budgetary allocation.
15	Create a trained workforce. Continuous evaluation of the employees.
16	Use of high-tech equipment. Training to be modernized. Incentive-based refresher courses.
17	Enhance the infrastructure of labs and provide more equipment. Recruit more personnel with the required know-how. Continuous refresher courses.
18	Building infrastructure. Restructure the existing training procedures. Use of sophisticated tools.
19	Dynamic training. Incentives for quality training. Increasing health allocation.
20	Improve health budget, and recruit specialists at District Levels. Educate people and enhance the training and skills of people associated with health governance.
21	Proper policy planning. Training a specialized group of people. Providing incentives to the Pvt sector for improving the infrastructure in the public sector.
22	Infrastructure development. Use of ICT tools.Skill enhancement of employees.
23	Inadequate beds per halqa. The absence of awareness needs to be countered by a mass information campaign.
24	Separate division to handle emergencies.
25	Information, training, and building infrastructure.
26	Need for augmentation of infrastructure and enhanced training of the public employees.
27	Empower grassroots level like panchayat to meet such challenges in the future.
28	Mass awareness and training of the employees.
29	Enhancing the working condition of the employees and making them accountable for the skills they are trained for.

30	Inter-departmental coordination, public trust building, training, and infrastructure should be the focus of future planning.
31	Equip the personnel fully. Building specialized infrastructure. Recruit specialists. Provide quality training to the already employed people.
32	Mass awareness. Continuous interaction with the public. Building quality infrastructure.
33	Use of media for mass information. Build sophisticated infrastructure. Invest in training and bettering the skills.
34	Building new hospitals. Recruiting more trained staff.
35	Capacity building should be a regular part of all departments. The health department needs a practical roadmap for future situations.
36	Infrastructure development and proper training. Allocating more funds.
37	Formulate a full-fledged policy to deal with pandemics. Invest in healthcare so that facilities are provided at par with the developed nation.
38	Dynamic training programs. Infrastructural development.Public Awareness
39	Training, infrastructure, and public awareness.
40	Quality infrastructure modernized training and Public Awareness.

The focus group conversation transcript has been carefully analyzed, and themes and subthemes have been identified. The results of the focused group discussion led to the development of different themes. Meanings were deduced from the responses because some of the study's responses were not mutually exclusive but interrelated and overlapped. The responses were grouped under various subthemes under the main five main themes. These are mentioned below

1. Role of healthcare workers during the Coronavirus crisis in Pulwama district.

2. Existence of policy programs at Public Healthcare institutes to deal with pandemics.

3. Competence of staff to handle pandemic-like situations.

4. Capacity-building measures

5. Policy Suggestions for future

1. Role of healthcare workers during the Coronavirus crisis in the Pulwama district

1.1 Huge patient rush

1.2 Enforcing lockdown with other COVID-appropriate measures

1.3 Regular monitoring of patients as well as contact tracing

1.4 Increased workload and multitasking

1.5 Scarce infrastructure

2. Existence of policy programs at Public Healthcare institutes to deal with pandemics.

2.1 Absence of pre-existing program against the disease

2.2 Regular Disaster Management Programme

3. Competence of staff to handle pandemic-like situations.

3.1 Lack of requisite skills

3.2 Absence of Information among healthcare workers

3.3 Lacunas in regular training of the healthcare workers

4. Capacity-building measures

4.1 Special programs

4.2 Incentivised training programs

4.3 Infrastructural capacity building

4.3.1 Infrastructural capacity building in the regular course

4.3.2 Infrastructural capacity building for pandemics like COVID-19

5. Policy Suggestions for future

5.1 Policy concerning general healthcare

5.2 Policy concerning the capacity building of healthcare workers

5.3Policy regarding infrastructural development

Description of the themes;

1. Role of healthcare workers during the Coronavirus crisis in the Pulwama district

1.1 Huge patient rush

After the outbreak of the pandemic, healthcare facilities were the first candidates for system failures because of the heavy patient load. As expected, the patient's first resort would be his nearest healthcare facility, but in view of the nature and speed of contamination, most patients

directly went to secondary healthcare facilities in the form of District and Sub District health centres or tertiary hospitals. The public, in exceedingly large numbers, became targets of the disease.

1.2 Enforcing lockdown with other COVID-appropriate measures

In addition to providing healthcare services to the public, healthcare workers were tasked with enforcing the lockdown in combination with other departments. Healthcare workers were also assigned the job of information dissemination through the door-to-door survey to the public.

1.3 Regular monitoring of patients as well as contact tracing

Healthcare workers continuously provide services in the form of monitoring the patients. They immediately went for sanitizing and contact tracing whenever new patients were found.

1.4 Increased workload and multitasking

The Public Healthcare sector was at the receiving end during the crisis. Healthcare workers were forced to work more than their regular tasks. They had to change their roles. They regularly worked in Quarantine centres, Treatment centres, Intensive care units, and other sections.

1.5 Scarce infrastructure

As the demand grew tremendously, the infrastructural abilities of the department fell short, so different institutions of other departments or the private sector were requisitioned to meet the rising demand. In Pulwama, quarantine and isolation centres were set up in private buildings.

2. Existence of policy programs at Public Healthcare institutes to deal with pandemics.

2.1 Absence of pre-existing program against the disease

There, in vogue, a regular plan was for routine measures. There is also an in-practice District disaster management plan, but any saner person did not expect situations of such magnitude. The specific pandemic management plan was not formulated before it struck. It was planning by default approach.

2.2 Regular Disaster Management Programme

There is a well-set-up program in the district to meet any natural calamities. The health department, in addition to others, is a stakeholder in the program. This program only caters to the exigencies which had been reported earlier.COVID-19, being a new disease, was complicated to be curbed by existing policies.

3. Competence of staff to handle pandemic-like situations.

3.1 Lack of requisite skills

The healthcare workers are provided training and skills of routine nature. They found it very difficult to handle the patient rush and other ailments in the initial stages. The nature of the disease, being new, caught them unaware, resulting in various management issues.

3.2 Absence of Information among healthcare workers

Healthcare workers lacked information regarding the various aspects of the disease. They were confused regarding their safety. With the passage of time, improvements appeared in their practices and knowledge.

3.3 Lacunas in regular training of the healthcare workers

Healthcare workers are provided with a routine course of training. Training needs to be robust and dynamic with the latest content. Rehearsals and demos should become a regular part of a healthcare worker's job. They need to be ready to meet any emergency in the future.

4. Capacity-building measures

4.1 Special programs

A unique series of programs need to be undertaken in the district to inform all the health department employees about the SOPs regarding pandemics. Dummy exercises and information brochures could help a long way.

4.2 Incentivised training programs

Training programs need to be incentivized. Healthcare employees should get job benefits or increased perks or monetary benefits. This will increase the interest of these workers in learning activities.

4.3 Infrastructural capacity building

The infrastructure needs to be increased by building more healthcare facilities and recruiting more qualified healthcare workers. Grass root infrastructure could help the health sector to deliver services at the nearest places to the general public. Improving the basic health structure could lead to enhanced facilities for the public as well as it will streamline the flow of patients.

4.3.1 Infrastructural capacity building in the regular course

There is an urgent need to create a robust healthcare system in the district. Building several healthcare facilities in far-flung areas could enhance the reach of healthcare facilities. Also, specialized facilities must be developed in the paramount locality to minimise referrals.

4.3.2 Infrastructural capacity building for pandemics like COVID-19

Investments are urgently required to procure tools and other medical equipment. We have seen a shortage of these during preceding waves. Special facilities in the form of Public healthcare institutes should be set up in more localities to meet the challenges of pandemic situations in the future. At the Panchayat level, there is a need to have a small team of healthcare workers who could act as a bridge during any public health emergency.

5. Policy Suggestions for future

5.1 Policy concerning general healthcare

Enhancing the level of training and upgradation of infrastructure should form the core of future health-related policies. As we can see, the population rate is increasing, and our healthcare standards should match the requirements. New diseases are raising their head. We need to be prepared for all sorts of healthcare issues. We could imbibe best practices from other places as well.

5.2 Policy concerning the capacity building of healthcare workers

Healthcare workers need to be resourceful, dynamic, and vibrant to the emerging problems in healthcare. Talented resources need to be brought to the department, and the existing human resources need to be provided with quality training in the form of regular refresher courses and other innovative means.

5.3 Policy regarding infrastructural development

Keeping in view the situations that existed in district Pulwama during the outbreak of COVID-19, all the policies regarding the healthcare sector should give a preference to the formulation of a state of an art resource centre in the district where any tool or equipment required anywhere could be quickly sent. In addition to it, there is a need to recruit more doctors and para-medical staff to fill the requirements at various facilities

The participants of the focus group discussion also responded to the objective-based questions. The outcome of this task is as follows.

Publicity about the disease:

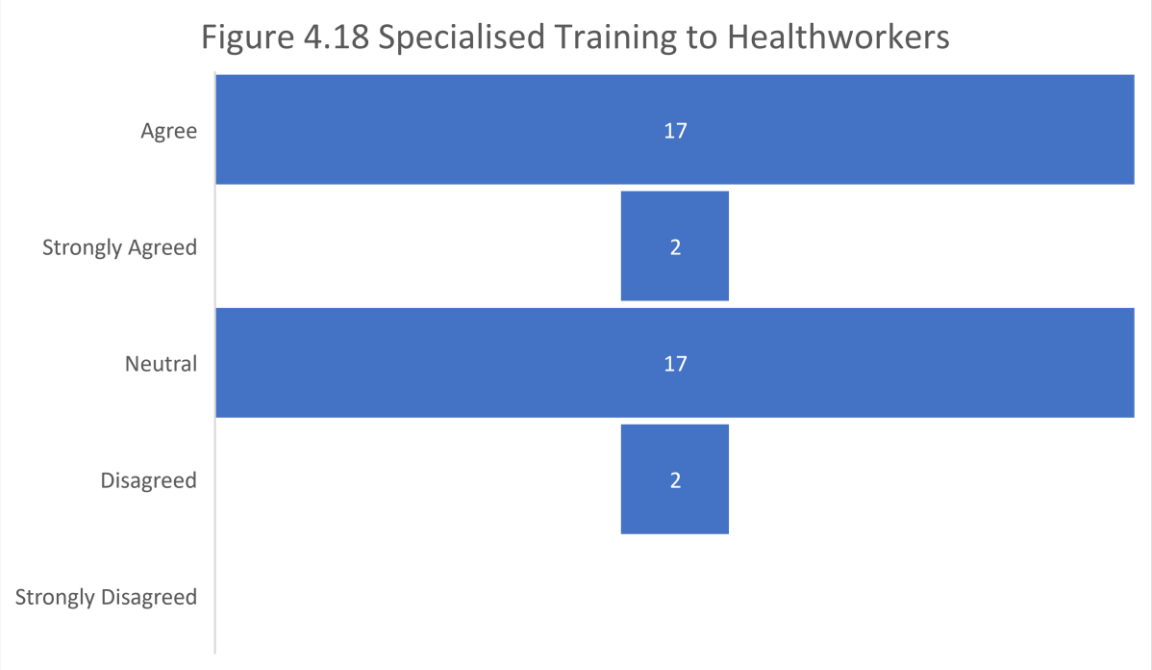
Regarding the publicity by the healthcare workers, 04 participants of the Focus Group Discussion strongly agreed, and 28 agreed that there were adequate measures regarding the

publicity of COVID-19-related affairs.06 disagreed, 02 were neutral, and none of the participants strongly disagreed.

Concerning the goal of patient treatment achieved satisfactorily by Hospitals, among the participants, 22 agreed, 05 strongly agreed, 09 were neutral, 04 disagreed and none of the participants strongly disagreed.

Agree	22
Neutral	9
Strongly agree	5
Disagree	4
Strongly Disagree	0
Total	40

With the aspect of doctors and nurses deputed for the program implementation being provided with special training,17 agreed, 02 strongly agreed,17 were neutral, 02 disagreed and no one strongly disagreed. It is shown in figure 4.18. There is a clear statement that the administration did not give people from different departments or health departments any specialized training. They utilized the skills which they had imbibed during preceding services.



A shortage of healthcare personnel hit the healthcare facilities in the district.36 out of the 40 accepted it as the main barrier to providing quality services during a pandemic. There was a shortage of healthcare personnel at healthcare institutions. The distribution of the responses is shown below.

Agree	27
Strongly agree	9
Neutral	3
Strongly disagree	1
Total	40

Arrangements for the medicine that was out of stock are made in time, which is the key to the program's success.29 agreed, one strongly agreed to the proposition., eight were neutral, and two disagreed. Necessary medicines were provided within the healthcare facilities.

Agree	29
Neutral	8
Disagree	2
Strongly agree	1
Total	40

Regarding the proposition that a shortage of materials like medicines & other equipment is the main barrier to effective treatment. 29 agreed, six strongly agreed, and five were neutral. None of the participants disagreed. Medicines and equipment like Oxygen-supported beds and ventilators form the framework's base for fighting against COVID-19.

Agree	29
Strongly agree	6
Neutral	5
Total	40

Regarding the proposition that administrative and managerial impede the working environment,21strongly agreed, and 19 agreed. Every participant agreed that the lack of proper administrative and managerial coordination results in mismanagement during emergencies.

Strongly agree	21

Agree	19
Total	40

Almost all participants believed that healthcare workers were undergoing long working hours.24 agreed,13 strongly agreed, and three were neutral.

Agree	24
Strongly agree	13
Neutral	3
Total	40

Concerning the proposition that Capacity-building activities of personnel during service are ineffective in terms of content and duration, most of them favoured the statement. Training and other skill enhancement programs need to be refurbished.

Agree	29
Strongly agree	6
Neutral	4
Disagree	1
Total	40

Coordination among various government departments was efficient. Twenty-six disagreed, three strongly disagreed, six were neutral and only five agreed. There was no proper coordination. Different rules and methods of work were impediments to effective coordination.

Disagree	26
Neutral	6
Agree	5
Strongly disagree	3
Total	40

As NGOs were also at the frontline in the battle against COVID -19. Coordination of the Governmental departments with other NGOs was also poor. Twenty-five disagreed with the

preposition, and nine strongly disagreed that there was any sort of better coordination with other NGOs

Disagree	25
Strongly disagree	9
Agree	3
Neutral	3
Strongly Agree	0
Total	40

Chapter 5

Findings, Results and Suggestions

The presence of health workers has been linked to improved outcomes, including decreased maternal and child mortality and higher coverage of initiatives like immunization campaigns. Although it seems simple, it is difficult to prove that the availability of health service providers is associated with improved mortality outcomes. The issues surrounding the effectiveness of health service providers, including their motivation, performance, and motivational variables, are still poorly understood. The 2006 World Health Report highlighted the human factor in providing healthcare services by concentrating on the healthcare workforce. It recognized the variables (health needs, health systems, and environmental factors) that drive the health workforce and the workforce issues that go along with them (numbers, skillset mix, distribution, and job conditions). The availability (retained and present) and competence of workers are considered critical components of a high-performing workforce (productive and responsive). Policymakers embrace effective human resource management (HRM) inside the health sector to guarantee such conditions. The management of people within a company is known as HRM. It entails the policies, procedures, and methods that managers can use to guarantee that there are enough employees available, equipped with the necessary abilities to carry out their duties, and driven to meet the organization's goals. Interventions in HRM are put into practice within current health systems. It is crucial to consider the context because what works in one country or setting could not precisely work in another or even in the exact location at a different period. Due to ill-conceived research, the evidence for the efficacy of HRM initiatives is either insufficient or flawed.

Promoting well-being at all ages and maintaining healthy lives is essential for sustainable development. The COVID-19 virus is producing an unprecedented worldwide health disaster by upending the lives of billions of people and dispersing human anguish around the globe. To attain universal health coverage, including financial risk protection, access to high-quality essential medical services, and access to essential medications and vaccines for all, according to SDG target 3.8.

5.1 Findings for Objective I

The first objective of this study was 'To analyze the role of healthcare workers in the recent Coronavirus outbreak in the district of Pulwama, Jammu and Kashmir.' There were various parameters upon which the role of the healthcare workers was analyzed, like the number of admitted patients, recovery rate, testing rate and the percentage of vaccination, and participants' responses.

As per the data collected from Health Department, it has been found that Up to 13th February 2022, the number of patients diagnosed with COVID-19 was 18,398. Almost all the patients were treated at District Hospital Pulwama and Sub District Hospitals. Less than 100 patients with other comorbidities were referred to Shri Maharaja Hari Singh Hospital and Sheri Kashmir Institute of Medical Sciences, Srinagar.

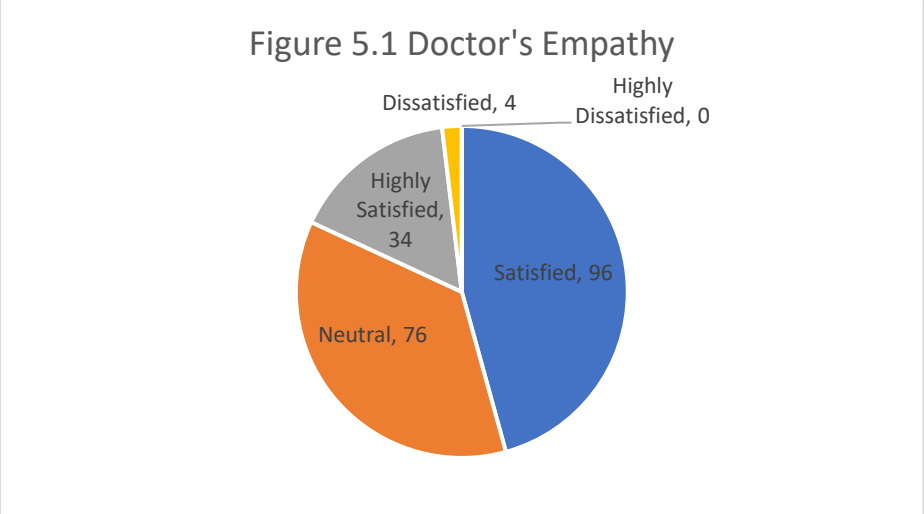
It has been found that the number of patients who died after being severely affected by COVID -19 till date is 289. 93 patients died in Block Pulwama,78 patients died in Block Pampore, and 60 and 58 in Block. The percentage of recovered patients in the whole district was 98.42%.

Also, up to 16th September 2021, 522776 tests were conducted, consisting of 145311 RTPCR, 377097 RAT, and 368 True NAAT tests. Later, a full-fledged RTPCR lab was set up at District Hospital Pulwama.

Total vaccination doses as per the online registration on the COWIN portal, It has come to be known that Upto 4 PM 11th August 2022 are 10,74,938, which includes 5,08,847 as the first dose, 5,34,908 as the second dose, and 31,183 as precaution doses.

Responses regarding different determinants of the SERVQUAL model also highlight the role of healthcare workers like the overall Concern for privacy shown by the healthcare workers during treatment. The respondents replied to this aspect as follows. Out of a total of 210 respondents, 95 were found satisfied,83 were neutral, 30 were highly satisfied, 02 were dissatisfied, and no one was highly dissatisfied.

Regarding the Doctor's empathy,96 were satisfied,76 were neutral,34 were highly satisfied,4 were dissatisfied and none was highly dissatisfied as shown in figure 5.



Regarding the availability of nurses in wards, the responses were as out of 210 respondents, neutral respondents were 99, satisfied were 94, highly satisfied were 15, dissatisfied was 02, and no one was highly dissatisfied.

Regarding the frequency of the doctor visits inwards, out of the total 210 respondents, 106 remained neutral, 88 were satisfied, 10 were highly satisfied, 06 were dissatisfied & no one was highly dissatisfied.

Regarding the extended working hours of healthcare workers, out of 20 respondents,11 agreed that there are substantial working hours for healthcare workers; eight were found to be firmly in agreement, while only one disagreed.

The respondents included 20 healthcare workers, of which nine agreed with the proposition that there was a shortage of healthcare workers and 11 were uncertain about the same. It gives a clear implication that there was a shortage of personnel to meet the COVID-19 situation.

The heavy inflow of patients and resource constraints were the two crucial issues flagged by each respondent from the health department.

It turns out that the role of healthcare workers was optimal as we consider it concerning various figures. There were problems regarding physical infrastructure. A sudden outbreak caught the personnel unaware. There were so many inter-departmental issues that harmed the service delivery.

5.2 Findings for Objective II

The study's second objective was ‘to explore the weaknesses in the present healthcare setup to make healthcare workers competent to face situations in hospitals and other institutions arising due to pandemic diseases.

The following is being obtained from the respondents as per the questionnaire.

Regarding Information about the availability of doctors, out of 210 respondents, 156 were satisfied, 43 were neutral, 07 were dissatisfied, 02 highly satisfied, and 02 highly dissatisfied. 52 respondents showed dissatisfaction, meaning there is scope for improvement in the methods and means to portray the information about the availability of doctors.

Table 5.1 Information about the availability of doctors

Response	Satisfied	Neutral	Dissatisfied	Highly satisfied	Highly Dissatisfied	Total
Information about the availability of doctors	156	43	7	2	2	210

Concerning waiting time before registration, there is immense scope for using more counters and new ICT methods for registering new patients. During pandemic-like situations, there is a need to establish special counters with requisite infrastructure.

Table 5.2 Responses regarding waiting time

Responses	Satisfied	Neutral	Dissatisfied	Highly satisfied	Highly Dissatisfied	Total
Waiting time	98	97	9	6	0	210

Regarding the availability of seating arrangements, more comfortable chairs and other seating equipment can be used. The standard seating arrangement enhances the comfort level of the patients.

Table 5.3 Responses regarding availability of seating arrangement

Response	Satisfied	Neutral	Dissatisfied	Highly satisfied	Highly Dissatisfied	Total
Availability of seating arrangement	124	9	73	4	0	210

The availability of medicines within the hospital can be improved further by augmenting the supply lines, especially during emergencies. As per the participant patients' responses, there is an absence of a satisfactory level of contentment.

Table 5.4 Responses regarding the availability of medicines in the hospital

Response	Satisfied	Neutral	Dissatisfied	Highly satisfied	Highly Dissatisfied	Total
Availability of medicines in the hospital	128	69	8	3	2	210

Concerning the hygiene of wards, bathrooms, and toilets, the satisfaction level among the participants was low. The cleanliness of bed Sheets and other clothing needs to be improved. There are various facilities regarding which the responses were collected. These need upgradations. Standards need to be uplifted as only 33 out of 210 were satisfied.

Table 5.5 Hygiene in bathrooms and toilets

Response	Satisfied	Neutral	Dissatisfied	Highly satisfied	Highly Dissatisfied	Total
Regarding the hygiene maintained in the bathrooms and toilets of the hospitals	33	60	70	0	47	210

Concerning the hygiene of the wards, only 36 patients were highly satisfied, and 31 were satisfied. It shows that healthcare workers need more training regarding keeping the wards clean.

Table 5.6 Cleanliness in wards

	Satisfied	Neutral	Dissatisfied	Highly satisfied	Highly Dissatisfied	Total
Hygiene of wards	31	73	70	36	0	210

Regarding the condition of bed sheets and other clothing, 110 participants were not satisfied. Cleanliness and regular changing of the bed sheets should form a part of the daily routine of healthcare workers. The condition of stretchers and wheelchairs needs to be improved. There were less than ten wheelchairs and five stretchers in District Hospital Pulwama. The same condition is in other Sub District Hospitals. The numbers need to be increased, and their maintenance should be a regular part of routine work.

Table 5.7 Condition of bed sheets, stretchers and wheelchairs

	Satisfied	Neutral	Dissatisfied	Highly satisfied	Highly Dissatisfied	Total
Bed sheets and other clothing	26	72	75	2	35	210
Responses regarding the Condition of stretchers and wheelchairs	84	91	11	18	6	210

Concerning the response of public health institutions to emergencies during COVID-19, only 12 out of 210 were dissatisfied. There was a better response as the whole healthcare machinery was involved in managing the disease. Regarding the food provided to the patients,91 were satisfied, 06 were highly satisfied,105 were neutral, 05 were dissatisfied, and 03 were highly dissatisfied.

Table 5.8 **Emergency responses and quality of food served**

Responses	Satisfied	Neutral	Dissatisfied	Highly satisfied	Highly Dissatisfied	Total
Responses regarding Emergency services	127	67	12	67	0	210
Quality of food	91	105	5	6	3	210

Regarding the behaviour of doctors' explanations about medicines, 84 were satisfied, 33 were highly satisfied, 89 were neutral, 03 were dissatisfied, and 01 were highly dissatisfied. With respect to the care given by the nurses, more patients were satisfied as well as highly satisfied. The courtesy shown by laboratory technicians and other paramedical staff is shown as under

Table 5.9 Behaviour of doctors and other paramedical staff

Response	Satisfied	Neutral	Dissatisfied	Highly satisfied	Highly Dissatisfied	Total
Doctor's explanation about medicine	84	89	3	33	1	210
The care given by nurses	103	97	8	97	0	210
The courtesy shown by the laboratory	97	102	2	8	1	210
The behaviour of paramedical staff	104	73	5	8	1	210

Regarding the availability of the test, there is a need to use more sophisticated means to provide timely information to the patients. Only seven patients were highly satisfied, and seventy-six were satisfied out of 210. With respect to overall facilities, 78 were satisfied, and 02 were highly satisfied. There is considerable scope for improving the healthcare system in the district to make it pandemic-ready.

Table 5.9 Information about tests and overall facilities in the healthcare system

Question	Satisfied	Neutral	Dissatisfied	Highly satisfied	Highly Dissatisfied	Total
Information about the availability of test	76	108	7	7	2	210

Overall facilities in the hospital	78	108	21	2	1	210

Responses from healthcare workers regarding the shortage of personnel were as follows, 11 uncertain, eight agreed, one strongly agreed, and no one disagreed or strongly disagreed. Because of the heavy influx of patients, there arose a staff shortage. Resultantly, the government requested the para-medical colleges to send the final year students to aid the general staff. Also, there was a lack of coordination between hospitals with other departments.

Table 5.10 Shortage of healthcare personnel and coordination of hospitals with other departments

Question	Uncertain	Agree	Strongly Agree	Disagree	Strongly Disagree	Total
Shortage of healthcare workers	11	8	1	0	0	20
Lack of Coordination of the hospital with other government departments	8	11	1	0	0	20

The healthcare workers agreed that in-service programs and other capacity-building measures were inadequate and ineffective during the COVID-19 pandemic.

Table 5.11 Inservice training programs

Question	Uncertain	Agree	Strongly Agree	Disagree	Strongly Disagree	Total
In-service education program for healthcare personnel is inadequate	5	10	5	0	0	20

Ineffective Capacity building measures	5	13	1	1	0	20

There was a shortage of healthcare workers. The capacity-building initiatives did not provide any satisfactory outcome. The requisite skills required for managing the pandemic were missing. Regarding the existence of a pandemic plan, 18 participants responded that there was no plan, while 02 responded that there was a plan in place. There was no prior planning for the outbreak.

During the focus group discussion, it was found that the Coordination of the Governmental departments with other NGOs was not better. 25 disagreed with the proposition of smooth coordination, and 09 strongly disagreed. Concerning coordination of healthcare departments with NGOs and other governmental agencies, 25 disagreed that there was efficient coordination, 09 Strongly disagreed while 03 Agreed, 0 were neutral, and none strongly agreed.

5.3 Findings for Objective III

The third Objective of this research study was to suggest policy measures for capacity building of healthcare personnel in Jammu and Kashmir. During this work of research, the following findings are there:

Enhancing healthcare facilities by making a policy framework or vision document with long-term and short-term goals. The department could form a committee of specialists and other administrators to formulate the policy framework. Diseases that recur regularly need continuous measures to curb them, and diseases that recur after an interval need a different approach. Pandemic diseases need to be covered by this policy framework. As it was found out during the outbreak of COVID-19, quality coordination and supervision were absent in various healthcare facilities in the district Pulwama. There is a need to have the different aspects of the

diseases covered within the policy. In the event of any pandemic disease, healthcare workers should find it easy to go by the book. A need to disseminate healthcare-related information to the public at regular intervals. This policy needs to be applied all over Jammu And Kashmir. The public should be a stakeholder in the policies and other matters affecting the general public's health.

Upgradation of the infrastructure by creating a reservoir of beds, ventilators, oxygen concentrators, and other vital equipment. Public health centres need to be set up at every halqa level, which is an agglomeration of three villages. These public health centres need to be set up on modern lines. They should effectively cater to the healthcare needs of the local populace. Building sophisticated health centres would strengthen the primary healthcare grid in the district. It would reduce the burden upon the District and Sub District Hospitals. In addition to patient care, these facilities could be easily used for information dissemination among the local population. Tertiary-level hospitals need to act as reservoirs and disseminators of information during the period of crisis.

Similarly, Sub District and District Hospitals need to be refurbished and remodelled on newer lines of medical science. There should be specialists and super specialists posted in these facilities. Equipped with better equipment, this layer of healthcare could provide all the required services to the public. It could result in better service delivery and lessening the burden upon tertiary healthcare facilities. The method of recruitment and service benefits need to be changed. Healthcare workers should prove that they can handle the crisis. This could be there through a well-defined mechanism. They need to be paid the highest in the industry so that they are fully interested in the job. They could be made accountable after such changes.

Upgrading Human resources by modifying the existing training paradigms. There is a need to train healthcare personnel on modern lines with a definite time for evaluation. Doctors and other healthcare workers need to put on a continuous evaluation mechanism. In case of deficiencies, there is a need to rectify them. Also, a separate course framework must be made for GNM, ANM and other paramedical students. This should enhance their knowledge and skills regarding the outbreak of pandemic-like diseases. There is a need for continuous full-dress rehearsals for situations like it. Healthcare workers should always find themselves in a learning environment. Personnel who have already been adjusted in the department must be put into conditions for skill enhancement with regular evaluation.

Performance appraisal in terms of training availed and the evaluation of healthcare workers. There is a need to have benchmark indexing regarding the performance of the personnel dealing with healthcare. The number of patients attended by the healthcare worker and the number of patients satisfied with the services. The number of employee training programs and their impact on the quality-of-service delivery should form part of this appraisal system. The use of ICT for this method is required where the patients, healthcare workers, and administrators are on board

5.4 Summary of findings from objectives of the study

The role played by the healthcare workers was remarkable in the sense that being a novel occurrence and the system was not ready to face such a situation in the shortest possible time. The number of patients received by public healthcare facilities was quite huge. The physical infrastructure and the skilled human resources were the impediments. Still, the healthcare workers played the best roles within the already discussed limitations of the system.

Various lacunas came to the front during the period of COVID- 19. Treating patients by healthcare facilities exposed various vulnerabilities within the healthcare system. There was a lack of proper information to the public regarding the disease. The general public had no information about doctors, medicine, or other aspects of COVID-19 Management. There was an absence of hygiene in wards, toilets, and bathrooms within the hospitals. There is a considerable scope where the Department of Health could take initiatives to upgrade the healthcare system. The training of the healthcare personnel needs to be upgraded, consisting of technical and soft skills. Healthcare workers are directly dealing with patients. Their skill sets have an impact on the quality of services. Hence there is an imminent need to elevate the training of the healthcare personnel to prepare them for future pandemics.

Various policy measures must be undertaken in the context of the COVID-19 outbreak. There is a dire need to overhaul the healthcare systems by taking help from other places. Imbibe better practices within the system. Upgradation of physical infrastructure and recruiting more skilled healthcare workers should be the priority. There is a need to have a paradigm shift concerning training healthcare workers. The training programs should reflect the current trends in the medical field. The training and other activities to enhance skillsets must be linked with the performance appraisal mechanism, in addition to it. Healthcare workers' job conditions need to be improved. The number of cases attended by healthcare workers and the level of satisfaction among patients should form part of the incentive-based reward system for healthcare workers.

5.5 Challenges in the healthcare sector to meet the latest situations arising out of Pandemics

The healthcare system was not ready to receive the massive influx of patients in a shorter time. There were various lacunas in the overall system. The system of training which has there been proving to be unsatisfactory. Patient management was not up to the mark. The manner of patient handling was not a streamlined one. There was much chaos, particularly in the initial phases. There was a requirement for equipment in the form of ventilators, oxygen-supported beds, and other associated tools. These were available in fewer numbers, directly affecting the service quality. The number of healthcare workers did not match the need of the situation. Healthcare workers were subjected to heavy workloads. It resulted in psychological strain in addition to the physical one. Though the Government announced some incentives for the frontline workers, it was not on par with the work they were subjected to. The government needs to make a holistic policy framework for 360-degree modification of the healthcare system to deal with pandemic-like situations in the future.

5.6 Administrative and financial perspective

The workforce needs to be conditioned with the surrounding situations of the organization. To promote a comprehensive healthcare system, administrative managers and top management must identify educated and skilled labour, ensure equitable deployment, and focus on the motivation and morale of healthcare employees. In reality, a gap is frequently interpreted as managerial inefficiency and incompetence. The Organization can better fulfil its objective of promoting health, maintaining public safety, and helping the needy thanks to improved management and administration. The organization's prompt and consistent response to the COVID-19 pandemic has demonstrated the effects of the ongoing transformation of management administration. The COVID-19 pandemic put the healthcare system's ability to provide care and its already overburdened management and administration. While ensuring that the values of equity and solidarity are respected, it effectively deployed an unparalleled workforce to give technical support at several facilities and provide supplies where markets have failed. It also responds to other health emergencies in unstable, conflict-affected, and vulnerable contexts while assisting governments and partners in maintaining or re-establishing essential services.

Because of the sudden occurrence, the administrative systems were not ready to work as per the requirements of this outbreak. Coordination among various agencies of government and

other Non-Governmental agencies was missing, mainly during the initial phases. The government faced challenges on various fronts, including enforcing lockdown and other COVID-appropriate behaviours.

There was not any specific plan to deal with pandemics. In addition to various grants from the central government, the local government agencies resorted to shifting funds from various heads and subheads to COVID management. It harmed other developmental works.

5.7 Job conditions of healthcare workers

Participant healthcare workers accepted the shortage of healthcare workers in the public health sector during the COVID-19 period. The hectic task not only puts a great deal of physical strain on one but also makes one more mentally stressed. Nurses in medical facilities are few and need to work 16–17 hours daily. Additionally, workers were reluctant to enter their employment due to infection worry. Healthcare workers repeatedly reiterated that the protective gowns and PPE kits provided by their hospitals were either lesser or low-quality. Another challenge for healthcare workers during the COVID-19 outbreak was the stigma in society about COVID-19 patients and treating them. The neighbours saw them as nuisances and avoided interacting with them for fear of spreading disease. All participants knew they had no additional incentive despite putting in extra time. The healthcare workers had to do multi-tasking like enforcing the lockdown and other COVID-appropriate measures, sanitization, contact tracing, testing, and working in quarantine centres. Lack of oversight and coordination was another major issue in managing this disease.

5.8 Public perception of public healthcare institutions

There is a general perception among the people that in case of pandemics like COVID-19, public healthcare facilities are the places of last resort. Nevertheless, the responses received during this research from patients and healthcare workers make it clear that the institution was not in a position to cater to the situation. There was no plan to deal with such a situation. There was a shortage of various tools required to manage this disease. The physical and human infrastructure could not withstand the abrupt demands of the outbreak. There is a need for mass information campaigns by the health department regarding its various services to the public.

5.9 Problems in the estimation

The healthcare system's efficiency is determined by assessing the quality of healthcare. Health services assessments clearly show how well they meet or surpass expectations, which is why it is vital. Patients' perceptions of the care they receive—positive or negative—are used to gauge how patients' attitudes regarding healthcare are perceived. The patient's happiness is ascertained by assessing his healthcare experience and paying attention to the calibre of the provided services. There is a strong correlation between patient happiness and the standard of medical care, making it difficult to assess how patients see the availability of healthcare services. Patient satisfaction measures how satisfied patients are with how well a hospital manages quality in terms of the services it offers and the outcomes in terms of health status, interactions with the medical staff, and the evolution of their health status. The quality of services (medical) is difficult to measure through a particular yardstick. This research mainly revolved around the abstract subject of the quality of the services provided by healthcare workers. The services provided by healthcare workers were analyzed through various aspects like the perception of the patients, healthcare workers, and other stakeholders. There is no single method or technique to measure the quality of the services provided at healthcare facilities. Research is underway to measure medical services' quality or the functional aspect. There is a need to frame a definite measuring scale to estimate services provided by various healthcare institutions. It could help the industry to gauge the service delivery of different institutions comparatively.

5.10 Future scope of the study

This research study has analyzed the capacity building of healthcare workers during COVID-19. Their role and the drawbacks in the healthcare system. Responses from patients, healthcare workers, and other stakeholders were solicited. This study has wide-reaching consequences. In addition to increasing the knowledge repertoire of the subject. This study could help the public health sector to work on the loopholes and plug the gaps. It could enhance the quality of the services. This research could be a foundation for further cross-cultural and cross-national studies. Different aspects of COVID -19 could be analyzed separately concerning different geographical regions.

5.11 Suggestions

Numerous studies have shown that the COVID-19 health services lack the health systems approach to healthcare delivery, which is anticipated to result in a comprehensive improvement

in the standards of care (Fridell et al.,2020) (Dhahri et al., 2020). The same is reflected by the comprehensive study of the capacity building of healthcare personnel during COVID-19 in the district of Pulwama. As a result, adopting an integrated strategy that concentrates on providing healthcare services with the best standards during COVID-19-like pandemic situations is necessary. The recommendations in this section have been arranged to enhance the capacities of healthcare workers in the healthcare delivery system.

System for Delivering Healthcare

For the execution of services during the outbreak of pandemics, there should be adequately configured, staffed, funded, mandated, and managed healthcare centres.

Enhancing healthcare facilities

It is necessary to design and implement facility-specific strategies for guaranteeing quality and achieving service guarantees as stipulated by Indian Public Health Standards to strengthen health facilities for delivering services during emergencies like pandemic situations. Based on the patient load and the facility's location, new infrastructure must be built, or the present infrastructure must be expanded. The medical facilities should have enough supplies and equipment, bolster referral systems across various levels of facilities and communities and provide a sufficient waste management infrastructure.

Upgradation of the infrastructure

Construction and remodelling projects must have a time limit. The state's annual plans and budgets should appropriately project the required funds. Existing facilities should be upgraded under Indian Public Health Standards (IPHS). A health facility's ability to provide services for care delivery typically acts as a crucial measure of how well-functioning the facility is.

Upgrading Human resources

A District Centre for Human Resources in Health must be established to ensure the proper administration of competency-based education that satisfies the requirements of the health system, conforms to modern norms and offers a platform for inter-professional education. It is necessary to reform, standardize, and scale up the training programs for medical experts, nurse practitioners, advanced nursing, community health officers, and public health professionals. It is necessary to enhance human resource management and establish cadres for clinical and public health roles. Capacity building is the “process of developing and strengthening the skills, instincts, abilities, processes, and resources that organizations and communities need to

survive, adapt and thrive in the fast-changing world" (Wikipedia, 2019). There should be sufficient p and in-service training for capacity growth. Healthcare professionals (staff nurses, ANMs, ASHA, and AWWs) should get sufficient pre-service or orientation training covering mother & child health services, family planning services, etc. Innovative training and education methods for maternal and child health in tribal regions will be supported with quick and high-quality material. To deliver efficient education and training services, it is necessary to strengthen training institutions. There are various strategies as part of the capacity building mentioned as

People Engagement	By preserving interpersonal connections.
Challenging the way people think	By focusing on the good things, they have accomplished, you may gently urge them to consider alternative approaches.
Response to issues	This will pique people's curiosity, increase awareness, and satiate their requirements.
Creating a personal image	This will assist them in appreciating the value of their actions.
Disseminate skills among locals	The traditional roles of community development professionals also include enablers and facilitators.
Rewards and incentive system	There should be a system to monitor actions that promote health through incentives or rewards.
Forming small groups during emergencies	ensuring that other healthcare professionals receive praise and acknowledgement for their efforts

Sufficiency of resources

It is essential to make a suitable investment in resources, train healthcare professionals, deploy trained and tech-enabled human resources, etc., at healthcare centres for the wise application of pandemic-related healthcare. From PHCs to CHCs, primary health care must be enhanced at higher levels, paying close attention to infrastructure, medical personnel, supplies,

equipment, connectivity, etc. In order to provide hospitalized specialist treatment alongside outpatient care, district hospitals should be modernized with investments in infrastructure, equipment, and experienced human resources.

Free prescription medication and diagnostic services at all public healthcare facilities

In government hospitals and healthcare facilities, there should be enough resources in the form of sufficiently competent employees, medications, and equipment. Through well-equipped state laboratories, the regulation of diagnostic testing and pharmaceuticals must be reinforced. Safety, security, and suitable transit options should be available for those who need to travel to medical institutions.

Evaluation of Performance

In order to track their success against measurable indicators, their increments will be tied to it. It is possible to track employee productivity to satisfy performance goals and advance to regular positions. The states and district health authorities are responsible for setting policies for medications, diagnostics, equipment, procurement, and logistics management facilities. To ensure that clients have continuous access to services, there should be routine need assessments, the wise use of medications, and vaccines, prompt procurement of these items (especially vaccines), smooth distribution to facilities (especially subcentres), and timely information dissemination of services. A computerized management information system, frequent stock updates, and other factors are required to implement effectively and guarantee high-quality services. Diagnostic tests should be prescribed, made consistently and affordably available to patients, and provided to the general public without charge.

Standard of Care

In addition to infrastructure, human resources, equipment, medications, and supplies, the provision of high-quality services calls for an effective organization with seamless operations and highly motivated to maintain high service standards. Accessible and inexpensive public sector services for the people of highly targeted areas are equally crucial in far-flung areas. Organizational structures will be built up at several levels for a quality assurance system to function effectively.

Observation and Control

Programme Management Units should be appropriately organized and staffed at the national, state, and district levels. The healthcare worker who would mentor or give LHVs/ANMs

supportive supervision at the district level enhances the standard of service delivery. Healthcare facilities should be under supportive supervision, and the capacity of frontline staff and service providers (staff nurses & medical officers) to provide high-quality treatment services should be strengthened.

Supportive oversight of frontline personnel

Healthcare workers are overseen by their seniors and others. As instruments to assist the supervisors, information communication technology should be used creatively. Non-financial incentives, supervisory plans, checklists, and guidelines should also be devised. This will improve the abilities of front-line staff members and aid in efficiently providing high-quality healthcare services. Any effort to make information available to the public can be categorized as one of the transparency initiatives in service delivery.

Information Technology intervention

Healthcare professionals can produce real-time data for disaggregated estimates and monitoring of numerous health indicators with the proper information technology utilization. By employing remote doctors in tribal communities, smart utilization of telemedicine and mobile phone technologies can improve healthcare delivery. Healthcare professionals should receive proper training in information technology for this purpose.

Systems for monitoring, information, and evaluation

It is intended that there will be adequate monitoring of hospital information systems, disease surveillance systems, death reporting systems, mother and child tracking systems, etc., as well as follow of delivered pandemic services to the beneficiaries in order to ensure adequate monitoring, supervision, and evaluation of health services.

Services for Community Outreach

Community outreach would enhance health promotion, illness prevention, and facility-based care. Nurse practitioners should be added to the system to supplement doctors and provide free access to essential diagnostics and medications. Pandemic-related services must be integrated with other programs for efficient deployment and use.

Referral Services

Public health facilities must have a solid basis built on the availability of primary healthcare services. For the management of complex cases, referral services should be accessible. Each

level of care is better-connected thanks to it (primary, intermediate, and tertiary). The provision of communicable disease management, which is included in universal health coverage, should be aided by such a network of referrals. More government clinics and dispensaries must be built to improve such services and reduce travel costs. The specified amounts must raise budgets for health care. Public financing must rise by at least 20% annually over the following five years, and these commitments must be seriously carried out. Primary healthcare, emergency health services, crucial secondary care, and life-saving tertiary care must be offered to underprivileged and vulnerable groups to reduce out-of-pocket and catastrophic health expenses. Therefore, more resources must be allocated to healthcare providers to meet international goals like SDGs for health outcomes and eliminate disparities in access to these services.

Collaboration with other departments and NGOs. A robust system needs to be kept in place through which the health department could effectively collaborate with other departments and Non-Governmental Organisations in emergencies.

Formalize and make system-driven accountability mechanisms. Use of ICT for performance appraisal and the responses of the public need to be made a permanent feature of daily routine work.

At the level of service delivery, more official, institutionalized systems for complaints and redressal should be implemented. In order to put structures in place to address urgent issues connected to the referral and transportation of patients at the institutions, they must be backed by rapid emergency response systems, such as telephone helplines.

Public Private Partnership during health emergencies

Various NGOs and commercial health groups can also support government health services, especially dispensaries, to deliver effective health services during pandemic times. Additionally, this may increase the scope of such services by the general public. Both formal and informal communication channels should be used for efficient communication between Public and Private/Non-Governmental Organization Partners and Public and grassroots-level health workers.

Public Awareness

To improve service utilization, public awareness needs to be raised. The people should understand the causes of pandemic diseases as well as the morbidity rate. They should know

local healthcare workers and various facilities dealing with different diseases. At public health care facilities like sub-centres, Public Health Centres, Community Health Centres, etc., ANMs and staff nurses should offer essential and emergency care. Since all public services are provided without charge, the general population must be informed through continuous interventional efforts and the media. There is a need for consistent awareness, which can be raised through Pamphlets in the local language, Awareness campaigns, dramas/festivals, Health Education, Social media, Advertisement on radio/ local announcements, Discussions, conferences, and special days. Combined efforts of PHCs, local bodies, Local Self Governance institutions, Educational institutions, NGOs, etc

Change in Behaviour and Communication

By implementing important healthcare practices, such as prompt care for pandemic complications, early testing or detection, hand washing, home management of fever and other ailments, skilled local healthcare workers, reducing misinformation, etc., a significant portion of complications and related deaths can be avoided. The best healthcare practices can be considerably improved, and myths and cultural barriers can be removed by implementing an integrated, evidence-based, effective behaviour change communication plan. Various audio-visual tools can be utilized to facilitate effective communication.

CONCLUSION

COVID-19 has been a disaster for the whole of humanity. All the aspects of our daily lives got affected. All the countries were at the receiving end, whether they were developed or developing. India was primarily affected during the second wave. Jammu and Kashmir were sailing in the same boat as the rest of the country's regions. This pandemic created havoc, but with it, there were lessons. We can learn from the outbreak to increase our preparedness for the future. The Healthcare sector is the first responder in pandemic situations. Hence there is a need to enhance and upgrade our health infrastructure. Resource allocation needs to be increased to have highly sophisticated equipment in sufficient numbers. The number of healthcare workers and their training also surfaced as a big issue while managing this pandemic. A skilled workforce in good numbers would enhance the efficiency and the reach to all uncovered areas. Capacity-building initiatives for healthcare workers need to be initiated. Training based on the latest medical knowledge needs to be part of the healthcare system. Continuous in-service training and other programs must be set up to keep the personnel in a state of readiness for meeting pandemic-like situations. It would result in lesser damages. When the system is prepared for more significant risks, more negligible aberrations in the form of seasonal flues, etc, could be taken care of. This pandemic should be a blessing in disguise for the healthcare sector by taking remedial measures as it is said, A Stitch in Time saves Nine.

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APPENDICES

Appendices A

Appendix A_1

Healthcare Patient Satisfaction Form in the English Language

Patient Satisfaction Form in the English language

Dear sir/mam,

My Name is Tavseef Ahmad Mir Ph.D. Research Scholar in the Department of Government and Public Administration, School of Humanities, Lovely Professional University, Punjab. I am pursuing a research study on the topic "**Capacity Building of Healthcare Personnel in Coronavirus Crisis: A Case Study of Pulwama (J&K)"** under the supervision of Dr. Manvendra Singh, Associate Professor. Please respond to the following questions designed for research. It will take only a few minutes of your valuable time to complete. All responses will be used for academic and research purposes only and will be kept in high privacy. Your support and cooperation are highly admirable.

Thank You

Tavseef Ahmad Mir
Ph.D. Research Scholar, Reg. No 11919633
Department of Government and Public Administration,
Lovely Professional University, Punjab

PART A: Preliminary Information About Respondent

Name of the patient……..

Hospital ……

Contact details(If Any)…….

Gender:

(a). Female

(b). Male

(c). Transgender

Education:

(a). Illiterate

(b). Primary

(c). Matriculation

(d).12th

(e). Graduate

(f). Postgraduate

(g). Others

Age in years:

(a) <20

(b) 21-40

(c) 41-60

(d) >60

Expenditure on medicine:

(a) Less than Rs. 5000

(b) Rs.5000 -15000

(c) Rs.15000 -25000

(d) Greater thanRs.25000

Monthly income: S

(a) < Rs. 20000

(b) Rs. 20000 -50000

(c) Rs. 50000 -100000

(d)>100000

PART B: Main Questions

Dear patient, how much are you satisfied with the facilities provided by the hospital?						
S.no	Index	Highly dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied
1	Information about the availability of doctors					

2	The system at registration counters to make an appointment					
3	Sign boards to access					
4	Waiting time between appointment and check up					
5	Availability of seating arrangement in the waiting area					
6	Availability of a cooling system in the waiting area					
7	Admission process					
8	Concern for Privacy					
9	The healthcare workers gave courtesy and respect					
10	Explanation by the doctor.					
11	The doctor's explanation of the medications					
12	Dietary plan prescription					
13	Availability of the nurses in the ward					
14	The care given by the nurses					
15	The courtesy showed by the laboratory technician					
16	The behaviour of paramedical staff					

17	Availability of the prescribed medicines in medical shops in the city outside the hospital					
18	Frequency of the doctor visit in a ward					
19	Availability of prescribed medicines in medical shops inside the hospital					
20	Information about the availability of test reports					
21	Hygiene of bathrooms and toilets					
22	Hygiene of wards					
23	Drinking water on the premises					
24	Cleanliness of bed sheets, pillows, and other material					
25	Condition of stretchers and wheelchairs					
26	Ambulance services					
27	Emergency services					
28	Blood bank facility					
29	Quality of food provided in the canteen					
30	Medical costs during the whole process of admission and discharge					
31	Process of paying bills					
32	Specialist doctors					

33	Follow up/re-check up					
34	Overall facilities in the hospital					
35	Will you recommend this hospital to others					

PART C: Subjective Questions

1. In terms of the infrastructure, were you satisfied with the facilities in the hospital?

2. Do you feel that the health personnel were adequately trained to treat patients like you?

3. Which areas/things/sections/technologies need to be improved in the hospital?

4. Which facilities impressed you during your admission to the hospital?

Appendix A2

Patient Satisfaction form in the Kashmiri language

Patient Satisfaction Form in the English language

Dear sir/mam,

My Name is Tavseef Ahmad Mir PhD Research Scholar in the Department of Government and Public Administration, School of Humanities, Lovely Professional University, Punjab. I am conducting a research study on the topic "**Capacity Building of Healthcare Personnel in CoronaVirus Crisis: A Case Study of Pulwama (J&K)"** under the supervision of Dr. Manvendra Singh, Associate Professor. Please respond to the following questions designed for research, it will take only a few minutes of your valuable time to complete. All responses will be used for academic and research purposes only and will be kept confidential. Your support and cooperation is highly admirable.

میون ناو چھُ توصیف احمد میر پی ایچ ڈی سکالر ڈِپارٹمنٹ آف گورنمنٹ اینڈ پبلک ایڈمنسٹریشن، سکوٗل آف ہیومینِٹیز، لَولی پروفیشنل یونیورسٹی، پنجاب۔بہٕ چھُس ایسوسیٹ پروفیسر مانوندر سنگھ سٕنٛز نِگرأنی مٕنز

"Capacity Building of Healthcare Personnel in CoronaVirus Crises: A Case Study of Pulwama (J&K)" کِس موضوٗعس پٮٹھ تحقیقی مطالعہ کران۔مہربأنی گٔرتھ دِیَو تحقیق کہ خأطٕر بناونہٕ آمتٕن سوالن ہُنٛد جواب۔

اتھ پوٗر کرنہٕ خأطٕر لگہِ تُہُنٛد کیٚنٛہہ کم قلیل وق۔تمام جوابات پِن علمی تہٕ تحقیقی مقصدَو خأطٕر استعمال کرنہٕ۔تہٕ پم پِن پوٗشیٖدٕ تھَونہٕ۔تُہُنٛد مدد تہٕ اتھواس چھُ سٮٹھاہ قأبلِ تعریف۔

Thank You

Tavseef Ahmad Mir

PhD Researcher Reg. No 11919633

Department of Government and Public Administration,

Lovely Professional University, Punjab

PART A: Preliminary Information About Respondent

Name of the patient……مریض سُند ناو

Hospital
بسپتال……

Contact details(If Any)……رأبطن ہنز تفصیل(اگر آسہ)

Gender:جنس

(a). Male مرد

(b). Female زُنی

(c). Transgender لأنس

Education تعلیم:

(a). Illiterate ان پڑھ

(b). Primary پرامری

(c). Matriculation میٹرک

(d).12th بُہمہِ پاس

(e). Graduate گریجویٹ

(f). Postgraduate پوسٹ گریجویٹ

(g). Others باقی

Age in years: عُمر وَرِیین منٛز

(a) <20 وُہِ کھوتہِ کم

(b) 21-40 اکوُہِ پیٹھ ژتجی تام

(c) 41-60 اکتأجی پیٹھہِ شیٹھ تام

(d) >60 شیٹھ کھوتہِ زیادِ

Expenditure on medicine: دَوہس پیٹھ خرچہ

(a)< Rs. 5000 پانژھ ساس روپیہ کھوتہِ کم

(b) Rs.5000 -15000 پانژھ ساس پیٹھہِ پنداہ ساس روپیہ تام

(c) Rs.15000 -25000 پنداہ ساس پیٹھہِ پنژہہ ساس روپیہ تام

(d)>Rs.25000 پنژہہ ساس روپیہ کھوتہِ زیادِ

Monthly income: ماہانہِ آمدنی

(a) < Rs. 20000 وُہہ ساس کھوتہِ کم

(b) Rs. 20000 -50000 وُہہِ ساس پیٹھ پنژاہ ساس روپیہ تام

(c) Rs. 50000 -100000 پنژاہ ساس پیٹھ اکھ لچھ روپیہ تام

(d)>100000 اکھ لچھ کھوتہِ زیادِ

PART B: Main Questions

Dear patient how much you are satisfied by the facilities provided by the hospital? ٹاٹھہِ مریضہ!ژِ کوتاہ مُطیِن چھُکھ ہسپتالس مٹز ڈسیاب سہوٗلیژن پیٹھ؟						
S.no	Index	Highly dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied
1	Information about Doctor availability	ڈاکٹر سٹنز ڈسیأبی متعلق زانکأری				
2	System at registration counters to take appointment	اپوینٹمنٹ رٹنہِ خأطرِ کَونٹرس پیٹھ سِسٹم				
3	Sign boards to locate the right room	صحیح کمرِ ژھارنہِ خأطرِ نِشانہِ بورڈ				
4	Waiting time between appointment and check up	اپوینٹمنٹ تہِ معاینس درمیان انتظارُک وق				
5	Availability of chairs in the waiting area	ٹھہر نچہِ جایہِ نِشہِ کُرسِیَن ہٹز ڈسیأبی				
6	Availability of fans in the waiting area	ٹھہر نچہِ جایہِ نِشہِ پکھن ہٹز ڈسیأبی				
7	Process of admission in the hospital	ہسپتالس مٹز دأخلِچ عمل				
8	Privacy aspects	رازدأدی ہٹدیٰ پہلو				
9	Courtesy and respect given by the doctor	بشکریہ تہِ ڈاکٹر سٹنڈِ طرفہِ دِنہِ آمُت احترام				
10	Explanation by the doctor about the disease	ببیمارِ متعلق ڈاکٹر سٹنز وضاحت				
11	Explanation by the doctor about medicines	دَوہس متعلق ڈاکٹر سٹنز وضاحت				
12	Dietary plan prescribed by the doctor	ڈاکٹر سٹنڈِ ذریعہ تجویز کرنہِ آمُت غذأیی منصوبہ				
13	Availability of the nurses in the ward	وارڈس مٹز نرسن ہٹز ڈسیأبی				
14	Care given by the nurses	نرسن ہٹز نظر گُزر				
15	Courtesy shown by the laboratory technician	لیبارٹری ٹیکنِشن سٹنڈِ طرفہ ہاونہِ آمُت بشکریہ				
16	Behaviour of paramedical staff	پرامیڈکل عملُک رُویہِ				
17	Availability of the prescribed medicines in medical shops of city outside hospital	شہرس مٹز ہسپتالس نیٚبرِ کنہِ تجویز کرنہِ آمتٕبن دَوہن ہٹز ڈسیأبی				

18	Frequency of the doctor visit in ward	وارڈس منٛز کثرت سان ڈاکٹرن ہُنٛد دورٕ
19	Availability of prescribed medicines in medical shops inside hospital	ہسپتالس منٛز تجویز کرنہٕ آمتٕن دَوہن ہٕنز ذسیأبی
20	Information about availability of test reports	ٹیسٹ رپوٹن ہٕنزِ ذسیأبی متعلق زانکأری
21	Hygiene of bathrooms and toilets	سرانہٕ کُٹھٕن تہٕ بیت الخلاہن ہٕنز صفأیی
22	Hygiene of wards	وارڈن ہٕنز صفأیی
23	Drinking water in the premises	احاطس منٛز چھٕنہٕ آب
24	Cleanliness of bedsheet, pillows and other material	بیڈ شیٹ، شانٕد گوٚنٛد تہٕ باقی سامانٕچ صفأیی
25	Condition of stretchers and wheelchairs	سٹرچر تہٕ وہٕل چیرن ہٕنز حالت
26	Ambulance services	ایمبولنس خدمات
27	Emergency services	ایمرجنسی خدمات
28	Blood bank facility	بلڈ بنک سہولیت
29	Quality of food provided in canteen	کینٹینس منٛز فراہم غذہٗک معیار
30	Medical costs during whole process of admission and discharge	دأخلہ پیٹھ چھُٹی ہٕنزِ عملہِ دوران طبی اخراجات
31	Process of paying bills	بِلن ہٕنزادا کرنٕچ عمل
32	Specialist doctors	مأہِر ڈاکٹر
33	Follow up/ re check up	فالو اپ /دُبارِ معاینہٕ
34	Overall facilities in the hospital	ہسپتالس منٛز کُلہٕم سہولیٚژ
35	Will you recommend this hospital to others	کیاہ توہٕی گُریٚواہ بیٚیَن لوٚکن اتھ ہسپتالس منٛز پٕنچ سفأرش

PART C: Subjective Questions

1.In terms of the infrastructure, were you satisfied with the facilities in the hospital?

کیا توٚہٕی چھِوا بنیأدی ڈھانچہِ کہِ لحاظہٕ ہسپتالس منٛز موجوٚد سہولیژن پیٹھ مُطمپٕن۔

2.Do you feel that the health personnel were properly trained to treat patients like you?

کیا توھہِ چھا باسان زِ صحتہٕ کِس عملس أس مریضن ہِنٛدِ خأطرٕ منأسب تربیت آمژ دِنہٕ۔

3.Which areas need to be improved in the hospital?

ہسپتالس کہٕن کمن کمن شعبن منٛز چھہٕ بہتری اننٕچ ضرورت

4.Which facilities impressed you during your admission in the hospital?

ہسپتالس منٛز دأخلس دوران کمَو سہولیٛژَو کٔریہٕ توٚہی متأثر

Appendix A_3

Questionnaire for Healthcare workers

Covering Letter

Dear sir/mam,

My Name is Tavseef Ahmad Mir Ph.D. Research Scholar in the Department of Government and Public Administration, School of Humanities, Lovely Professional University, Punjab. I am pursuing a research study on the topic "**Capacity Building of Healthcare Personnel in Coronavirus Crisis: A Case Study of Pulwama (J&K)"** under the supervision of Dr. Manvendra Singh, Associate Professor. Please respond to the following questions designed for research. It will take only a few minutes of your valuable time to complete. All responses will be used for academic and research purposes only and will be kept confidential. Your support and cooperation are highly admirable.

Thank You

Tavseef Ahmad Mir

Ph.D. Researcher Reg. No 11919633

Department of Government and Public Administration,

Lovely Professional University, Punjab

Part A: Preliminary Details About Respondents

Name:

Contact details:

1. Age (in years)

(a) 18 to 28

(b) 29 to 38

(c) 39 to 48

(d) 49 to 58

(e) Above 58.

2. Field of the Officials

(a) Medical Officers

(b) Social Work

(c) Bureaucrat

(d) Academic

(e) Others

3. Gender

(a) Male

(b) Female

(c) Other

4. Years of Experience

(a) Less than 5 years

(b) 6 to 10 years

(c) 11 to 15 years

(d) Greater than 15 years

Part B

You have to tick the (✓) mark to express responses for each statement.

Note: Complete the following by placing the tick (✓) mark in the appropriate place

SA- Strongly agree, **A-** Agree, **U**-Uncertain, **DA-**Disagree, **SDA-**Strongly Disagree

S.No	Item	SA	A	U	DA	SDA
1	There is adequate publicity regarding COVID Care services					
2	These services cover all types of patients					
3	Hospitals achieved the goal of patient treatment satisfactorily					

4	Doctors and nurses deputed for the implementation of the program were provided with the special training					
5	There was a shortage of healthcare personnel at healthcare institutions					
6	Prompt and effective treatment was provided to the patients					
7	Provision of inadequate in-service education program for health care personnel and employees from other departments					
8	Arrangements for the medicine that was out of stock are made in time, which is the key to the program's success.					
9	Shortage of materials like medicines & equipment is the main barrier to effective treatment.					
10	Administrative and managerial problems affect the working environment.					
11	Long Working hours					
12	Accurate maintenance of records for Indoor and Outdoor clients.					
13	Repair and maintenance of the articles, equipment, and instruments used for COVID Management purposes are always done on time.					
14	Personnel capacity-building activities during service are ineffective in terms of content and duration.					
15	There are heavy work loaded employees					
16	You are satisfied with the employees' salary as per their working conditions.					
17	Regular supervision and training of employees at the workplace					
18	Coordination among various departments of the Government					

19	Coordination of the Governmental departments with other NGOs					

Part C: Subjective Questions

1. What are the various problems and challenges faced by you in managing COVID patients?

2. Was any existing plan to deal with such a situation?

3. Do you feel the staff was competent to meet the demands of COVID treatment?

4. Is there a need for Capacity Building for such situations? If yes, how?

5. What improvements would you like to suggest for meeting Pandemic situations in the future?

Appendices B

Appendix B1

List of health institutions visited

Government District Hospital Pulwama
Shri Maharaja Hari Singh Hospital(SMHS) Srinagar
Sheri Kashmir Institute of Medical Sciences(SKIMS) Srinagar
Chest Diseases Hospital Srinagar
Sub District Hospital Pampore
Sub District Hospital Tral
Sub District Hospital Rajpora
Chief Medical Officer Pulwama
Directorate of Health Services Kashmir
Primary Health Centre Kakapora
Primary Health Centre Lajoora

Appendix B2

People contacted to validate the content of the questionnaire

Dr Waseem Dar, General Physician
Dr. Gowhar, Consultant
Dr. Haseena Mir
Dr. Tehmina
Dr. Aflaq
Mr Rafeeq Ahmad
Mr Jawaid Ahmad
Dr. Parvaiz Ahmad
Dr. Imtiaz Ahmad

Appendices C

Appendix C1

Papers published in Journals

S.No.	Title of paper with author names	Name of journal/conference	Published Date	Issn no/ vol no, issue no	Indexing
1.	Digital Education and the Changing Dynamics by Dr Manvendra Singh and Tavseef Ahmad Mir	Shodh Sarita	October-December,2020	2348-2397/ Vol.7, Issue 28	UGC-CARE
2.	Institutional Capacities of Healthcare sector to face pandemics like COVID-19 by Tavseef Ahmad Mir and Dr Manvendra Singh	International Journal of Research and Analytical Reviews	January-2021	2348-1269/2349-5138/ Vol.8, Issue 1	Peer Reviewed
3.	Role of District Hospital Pulwama(J&K) In Mitigating the Coronavirus Pandemic	Turkish Online Journal of Qualitative Inquiry	July 2021	1309-6591/ Vol.12, Issue 8	SCOPUS
4.	Inclusive Governance and National Rural	International Journal of Social	29-Apr-22	2091-2986/ Vol.9, Issue 2	Peer Reviewed

	Health Mission: A Case study of Pulwama (J&K)	Sciences And Management			
5.	Indian Healthcare Sector and the Sustainable Development	International Journal of Current Research And Review	01-02-2022	2231-2196/0975-5241/ Vol.14, Issue 14	
6.	COVID-19 Appropriate Governance Model in Bandipora District of Jammu And Kashmir	Journal of Positive School Psychology	June 2022	2717-7564/ Vol.6, Issue 4	SCOPUS
7.	COVID 19 and the Socio-Psychological Impact in India	COVID-19 Crises Psychosocial Perspectives	September 2021	978-93-91178-37-6	Book Chapter
8.	Post-COVID-19 Role of Government: A Study of Healthcare Administration in Pulwama, Jammu and Kashmir	NeuroQuantology	September 2022	1303-5150	SCOPUS

The paper titled, Role of District Hospital Pulwama(J&K) in Mitigating the Coronavirus Pandemic published in Scopus Indexed, Turkish Online Journal of Qualitative Inquiry

Role of District Hospital Pulwama(J&K) in Mitigating the Coronavirus Pandemic

Turkish Online Journal of Qualitative Inquiry (TOJQI)
Volume 12, Issue 8, July 2021: 3078-3085

Role of District Hospital Pulwama(J&K) in Mitigating the Coronavirus Pandemic

Tavseef Ahmad Mir[1] and Dr. Manvendra Singh[2]

1. PhD Scholar Department of Government and Public Administration, Lovely Professional University Punjab, India

2. Assistant Professor, Department of Government and Public Administration, Lovely Professional University Punjab, India

Abstract

The COVID-19 has evolved into a globally unprecedented challenge, particularly for the healthcare industry. Global turmoil has been caused by this disease's new spread and effects. The Indian state of Jammu and Kashmir's administrative district includes the district hospital Pulwama. Since the spread of the Coronavirus, this hospital has been classified as a special COVID Care hospital. Even with limited human and financial resources, this hospital was crucial in controlling the crises brought on by the spread of this terrible contagious disease during the pandemic. To address the expanding health-related difficulties, it is necessary to re-evaluate the function of secondary-level healthcare institutes at district levels. Policymakers must consider the current situation and the role played by these facilities into consideration while formulating policies for the future. The Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) has given this healthcare facility the chance to learn and unlearn different approaches and procedures to handle similar circumstances in the future. This essay is an honest and earnest attempt to look into how Pulwama District Hospital in Kashmir, India, helped to contain the Coronavirus crisis.

Keywords

COVID-19, healthcare administration, capacity building, policy, district hospital Pulwama

Introduction

One of the twenty districts in the Indian state of Jammu and Kashmir is Pulwama. District hospital Pulwama was made a special COVID care hospital after the Coronavirus epidemic broke out in this area. For the entire world, coping with the difficulties brought on by this pandemic was unprecedented. The same applies to medical facilities all around the world, including in this region. This hospital served not only the residents of this district but also those of nearby districts like Shopian and Budgam, which are other districts in the Kashmir region.

The territorial districts of Pulwama and Shopian make up the catchment area of the district hospital Pulwama, which was founded in 1984. (Erstwhile part of District Pulwama). The district hospital in Pulwama serves a population of 5.60 lac people and a catchment area of 1090 square kilometres, which includes roughly 327 villages. The entire nation was affected by the Coronavirus pandemic in 2019—this region's district Pulwama included. This facility was designated as a special hospital to handle escalating emergencies. This essay looks for connections and correlations between several facets of infrastructural development, service delivery, and capacity building at the district hospital in Pulwama.

Study Design: This study employed a mixed-approach methodology that included both quantitative and qualitative techniques, such as sampling, literature reviews, interviews, questionnaires, and focused group discussions. There are 50 people in the sample, including physicians, patients, paramedical workers, and important administrators.

Limitations

The Pandemic is still ongoing. The majority of the population has not yet received vaccinations, and the immunisation effort is still in its early stages. When conducting fieldwork, extreme caution needs to be maintained. Additionally, because District Hospital Pulwama is a government institution, some staff members had reservations about sharing the primary data, and it was difficult for them to find time to complete the questionnaires, given their busy schedules.

Review of Literature

Jeff Hwang et al. (2020), in their article titled, “Responding to the COVID-19 pandemic the role of occupational health services in a tertiary hospital in Singapore”, have stated that

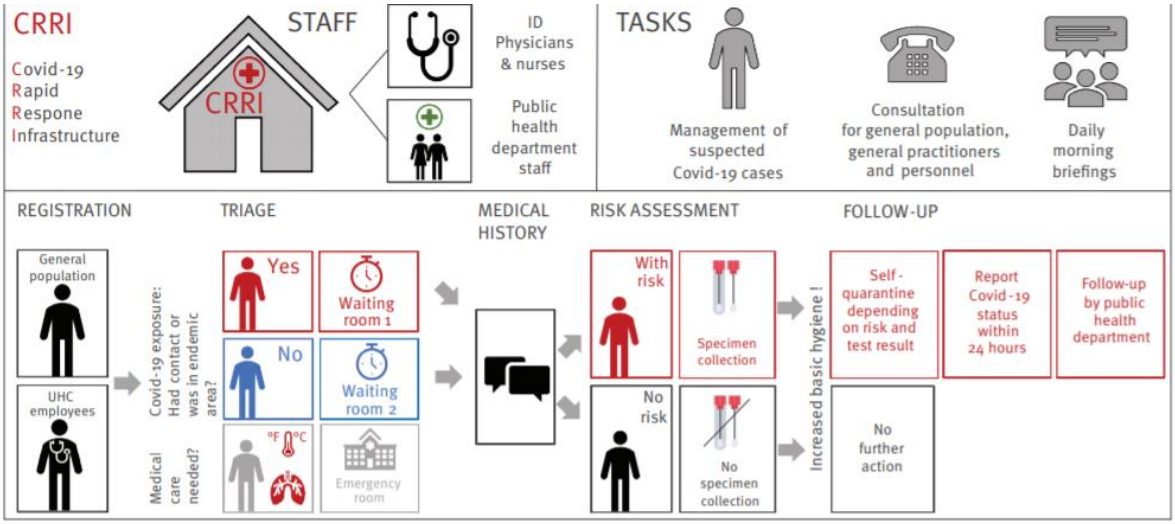
pandemic situations like this one should not go unnoticed. It gives us the chance to conduct a formative analysis of the problems plaguing the nation's healthcare system. It forces us to reconsider our current paradigms and organisational frameworks used by different government sectors.

Basher and Haque. (2020) in an article titled “Public policy lessons from the COVID-19 outbreak: How to deal with it in the post-pandemic world?” advocated for providing health care at grass root levels uniformly. The infrastructure and skill sets in the healthcare industry need to be improved in order to achieve universal health coverage. Policies must be developed while taking into account the conditions brought on by pandemic diseases.

Chopra Teena et al. (2021), in the article entitled “COVID-19 corollary: the changing role of a hospital epidemiologist in the new world”, declared that preparation is a fundamental requirement for reducing any potential infectious threats. The framework for public health and hospitals needs to be strengthened. The staff needs to be adequately equipped through skill development and safety measures.

Bragazzi (2021), in the article entitled “The Role of Hospital and Community Pharmacists in the Management of COVID-19: Towards an Expanded Definition of the Roles, Responsibilities, and Duties of the Pharmacist”, tried to present the vital role played by pharmacies within hospitals in combating COVID-19. There is a need for inter-sectoral and interprofessional collaboration within hospitals.

Augustin et al. (2020) in the article “Rapid response infrastructure for pandemic preparedness in a tertiary care hospital: Lessons learned from the COVID-19 outbreak in Cologne, Germany”, analyzed the situations faced by hospitals in Cologne, Germany. They concluded that new situations need to be dealt with with new solutions. One of the best practices adopted by the hospitals in Cologne, Germany, was the framing of a mechanism to receive a huge rush of patients in a streamlined manner, as shown below.



Source: University Hospital Cologne.2020 (www.eurosurveillance.org)

Thiagrajan (2020), in the article "COVID-19 exposes the high cost of India's reliance on private healthcare", aims to emphasise the necessity for more investment in the public healthcare system. Private organisations follow the maxim of profit. In a welfare state, private sector organisations cannot be of much assistance to government programmes aimed at accomplishing social objectives. It is necessary to reframe healthcare regulations and give public health organisations the major responsibility for carrying out various healthcare programmes.

Singh et al. (2020), in the article titled "Estimating the Impact of Covid-19 Outbreak on High-Risk Age Group Population in India", sent out a warning regarding the weaker groupings. Effective steps must be taken to prevent the disease from spreading to high-risk populations. These measures ought to cover appropriate social and medical assistance.

Tyagi et al. (2021), in the article entitled "COVID-19: Journey so far and Deep Insight Using Crowdsourced Data in India", proposed taking pandemic containment policy measures while taking local population density into account. The availability of equipment at hospitals improves service delivery. Thus it is now necessary to add more advanced medical equipment for the efficient management of coronavirus sickness.

Changotra et al. (2020), in the article "Largest democracy in the world crippled by COVID-19; Current perspective and experience from India", highlight the urgent need for attention to be given to India's public healthcare system. Because just 1.28% of GDP is allotted to the health sector, it is underfunded. COVID-19 serves as a reminder to make long-term improvements to the public healthcare system.

Chowdhury and Joma. (2020), in their article “Responding to the COVID-19 pandemic in developing countries: Lessons from selected countries of the global south”, said that the pandemic crises have made a "whole of government" and "whole of society approach" necessary. The fundamental tenet for responding to a situation like COVID-19 shall be inclusive, responsible, and flexible policymaking and a solid institutional framework.

Mohan et al. (2020), in the article entitled “Clinico demographic profile and hospital outcomes of COVID-19 patients admitted at a tertiary care centre in north India, " stressed the importance of documenting different patient admission criteria for coronavirus. Only qualified, skilled healthcare professionals could work with such energy and zest. Drawing conclusions from various medical procedures related to COVID-19 requires technical expertise to handle such circumstances.

Dabholkar et al. (2020), in the article “COVID-19 infection in healthcare Professionals, risks work safety and psychological issues”, claimed that in the coronavirus pandemic, healthcare personnel are the front-line warriors. They are more likely to get a condition like this. Because of their difficult circumstances, it is important to boost their morale by keeping their workplaces secure so that they can carry out their jobs effectively and to the best of their abilities.

Maity et al. (2020), in the article entitled “Interstate disparities in the performances in combatting COVID-19 in India: efficiency estimates across states”, argue in favour of enhancing and effectively utilising India's current health infrastructure. There are differences in how the pandemic is being handled. Infrastructure deficiencies and a lack of skill on the part of healthcare workers are the leading causes of the same.

Bhat et al. (2020), in the article “Depressive and anxiety symptoms, quality of sleep and coping during the 2019 coronavirus disease pandemic in the general population in Kashmir”, noted that a lack of prior planning left healthcare staff mentally unprepared to handle COVID-19-related events. The patients' psychological conditions were negatively impacted by the lockdown and the idea of working from home.

Saleem et al. (2020), in the article “COVID-19; Preparedness and response by the union territory of J&K for containment of pandemic”, claims that the administration of the Union Territory took a number of steps to contain the pandemic. It included public awareness campaigns, steps to dispel rumours, and the dispatch of enough police officers to enforce the

lockdown. Setting up other infrastructure, including hospitals, for patients. The key to addressing future demands is coordination amongst diverse departments.

Meraj et al. (2020), in the article “Coronavirus pandemic versus temperature in the context of the Indian subcontinent: a preliminary statistical analysis”, examined the link between temperature and the transmission of the coronavirus. It was determined that temperature should not be used as a benchmark when deciding how to control the condition. This fact needs to be taken into account when upgrading the infrastructure and other actions.

Research Methodology:

This paper used quantitative and qualitative methodologies in a mixed-approach methodology. Sampling, interviews, surveys, and focused groups of 50 samples, including doctors, patients, paramedical workers, and important administrators, make up the sample size**.**

Data Collection

The sample size for this study is 50, which includes ten regular hospital patients, 20 paramedical employees, and 15 physicians. Patients were subjected to telephone interviews while healthcare workers received questionnaires. Administrators, among others, make up the group of five critical informants chosen for focused group discussions. Primary information on a number of concerns was received from the Chief Medical Officer's administrative office. Healthcare professionals, including doctors and paramedical staff, were given a questionnaire with questions about several hospital aspects. Additionally, data on the hospital's immunisation department's coronavirus vaccine programme was acquired. Additionally, secondary information was gathered from the National Health Mission, Ministry of Health and Family Welfare, Government of India, Director of Health Services Kashmir, and Deputy Commissioner Pulwama websites.

Data analysis

The patients of the Pulwama district and the surrounding areas received services from this hospital, which has been designated as a special COVID Care hospital. For indoor patient care, there are more than 50 wards. For COVID patients who had been admitted, more than 30 wards had been set aside. More than 18 consultants, 20 specialist medical officers, 16 medical officers, and additional paramedical professionals are employed. Table I provides the details of manpower available at District Hospital Pulwama.

Table I Manpower

Consultants	18
Specialists	20
Medical Officer	16
Pharmacist	7
Nursing Staff	20
OT Technician	4
Nursing Orderly	11
Other Class	7
Drivers	6
Carpenter	1
Electrician	1
Plumber	1

Source: Director Health Services Kashmir,2021

The hospital initially experienced equipment shortages of several different kinds, but these problems quickly disappeared. High-power masks and personal protective equipment kits were readily accessible in sufficient numbers. At any time, more than forty Personal Protective Equipment kits were available. Healthcare professionals felt more secure as a result. The perception of safety among such workers was gauged by providing four options, absolutely safe, safe, to some extent, and not at all. Out of the responses received, 30 % selected absolutely safe, 50 % replied that they feel safe, 15 % responded that they feel safe to some extent, and 5 % felt not safe at all. 80 % of respondents felt that their duties were not going to harm them. The ease of doing their work was gauged by three options, yes absolutely, to some extent, and not at all. 30 % opined that they feel absolutely easy to work in such crisis-like situations,50 % responded they are at ease to some extent, and 20 % felt unease in working in such situations.

Concerning vaccination, up to 19 June 2021, a total of 12808 vaccinations were done at the hospital. The staff that was sent out for the vaccine had a positive attitude, but the majority of them grumbled about their inconsistent pay or other benefits.

The majority of respondents believed that capacity building is a crucial part of pandemic preparations in terms of training and skill sets. When it came to prioritising ideas for future improvements to this hospital, expanding skill development took the top spot, followed by infrastructure improvement and an increase in the number of healthcare personnel. as shown in Figure I below:

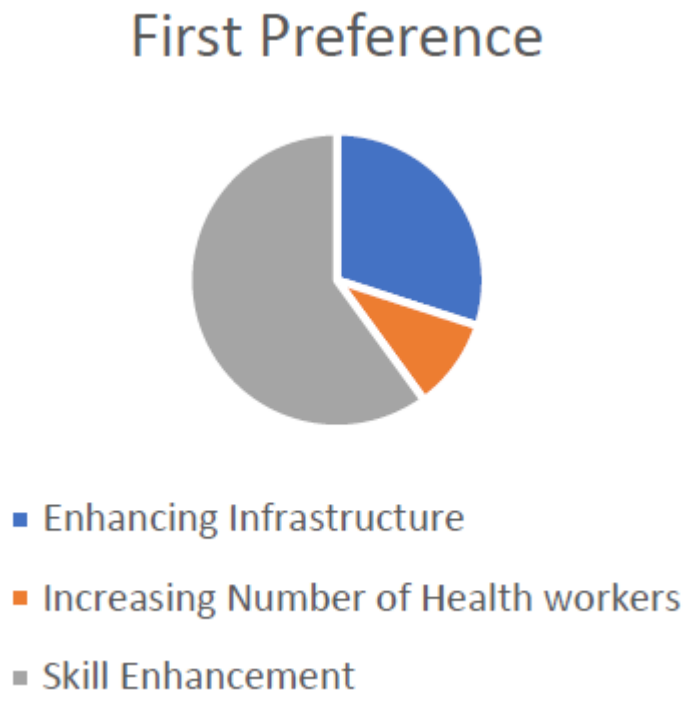


Figure 1

For funds, the hospital utilized payments received under the National Health Mission by the Government of India and special grants by district and divisional administration**.**

Conclusion and Suggestions

The district hospital in Pulwama was crucial in the fight against the COVID-19 pandemic. Despite having fewer facilities and healthcare professionals, the institution was nonetheless able to fulfil its primary objective of offering adequate services even during trying times. The ability to handle these situations, for which appropriate action must be taken, is a crucial component that the medical personnel lacks. Additionally, there is a pressing requirement for this institute's numerous departments to have a communication tool-equipped liaison system.

The District Hospital's involvement is fairly amazing, considering its lack of resources and human capacity. Thousands of COVID-19 patients were treated at this facility, setting an example of commitment, dynamism, collaboration, and innovative leadership for the Public Health Administration. When creating future policies and initiatives, policymakers must take district hospitals' functions into account. District hospitals serve as a vital link between primary and tertiary healthcare facilities, and their growth could fundamentally alter the healthcare industry as a whole.

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Appendix C_2

Swayam NPTEL, online exams and other achievements

Successfully Qualified UGC NET in 2019 and was selected as MANF Fellow.

Public policy-An introduction, 15-week-long SWAYAM Course qualified successfully in 2019

State and Local Governance; Machinery and Processes, 15-week long SWAYAM course qualified successfully in 2019.

Advanced Constitutional Law. A 15-week-long SWAYAM course qualified successfully in November 2020

Successfully Qualified a 16-week-long SWAYAM Course entitled Sociology of Development offered by the Ministry of Education through Indira Gandhi National Open University.

Successfully Qualified a 15-weeklong SWAYAM Course entitled Introduction to Public Administration offered by the Ministry of Education through the Department of Public Administration, Kurukshetra University Kurukshetra (Haryana), India.

Completed Short Term Course on Research Methodology using Statistical Tools organized by Lovely Professional University w.e.f. May 24, 2021, to May 29, 2021 (6 days)

Successfully qualified for the Senior Research Fellowship under MANF in January 2022

Completed “Refresher Course on Mixed Methods Research” w.e.f. January 10 to January 31, 2022(20 Days), by Lovely Professional University.

Appendix C_3

Conferences, Webinars, Workshops and Seminars attended

Presented a paper entitled **"Digital Education and the changing dynamics**" at the National E-Conference on Education and Development: Post COVID-19 organized on 26th September 2020 by the School of Education, Lovely Professional University, Punjab.

Presented a research paper "**Indian Healthcare Sector and Sustainable Development**" at the conference entitled "National Conference on Sustainable Environment; Challenges and Opportunities" 8-9 September 2021, hosted by Dr. B. R. Ambedkar National Institute of Technology Jalandhar

Participated in an online seminar delivered by Ambassador Anil Trigunayat (IFS Retd) on the topic "Emerging Dynamics in the Middle East and India's Options" hosted by the Department of Political Science, School of Humanities, Lovely Professional University on 3rd July 2021.

Presented a paper '**Inclusive Governance and National Health Mission: A Case study of Pulwama (J&K)**' at the International Conference on EQUALITY, DIVERSITY, AND INCLUSIVITY: ISSUES AND CONCERNS,25th September 2021, hosted by the School of Humanities Lovely Professional University, Punjab

Presented a research paper, "**Decentralization through Local Self Governance in Pulwama, Jammu And Kashmir**," in two days National Conference on "Experiences on Decentralization, Tribal Local Self-Governance, and Its Implications: Perspectives from Academics and Policy Makers" organized by Indian Institute of Public Administration in collaboration with National Tribal Research Institute, New Delhi on 29th & 30th November 2021.

Participated in an online seminar delivered by Dr. Raghab P. Dash, Private secretary to the Union Minister of Micro Small and Medium Enterprises, on the topic "Legislative Processes in India" hosted by the Department of Government And Public Administration, School of Humanities, Lovely Professional University on October 30 2021.

Presented a paper '**COVID-19 Appropriate Governance Model in Bandipora District of Jammu And Kashmir**' at the 10th International Conference on Technology, Innovation And Management For Sustainable Development Hosted By ITM University Gwalior on25-26 March 2022

Participated in an online seminar delivered by Major General Prabdeep Singh Behl on the topic "Leadership in the VUCA World" hosted by the Department of Government And Public Administration, School of Humanities, in collaboration with the Division of Industry Interface, Lovely Professional University on February 23, 2022

Participated in an online seminar delivered by Dr. Vibhuti Singh Shekhawat on the topic "Peace, Justice & Strong Institutions in India" hosted by the Department of Government And Public Administration, School of Humanities, Lovely Professional University on March 11, 2022.

Presented a paper titled "**Dynamics of Intellectual Property Rights in India**" at the First International Conference on Innovation and Intellectual Property Rights (IPR) on 18-19th Apr 2022, organized by Lovely Professional University with knowledge partner Punjab State Council for Science and Technology, Chandigarh

Presented a paper titled "**Post COVID-19 Role of Government: A Study of Healthcare Administration in Pulwama, Jammu and Kashmir**" in the International Symposium on "World Order Under Strain: Emerging Political and Economic Challenges" held on 10th June 2022 organized by the Department of Political Science, Lovely Professional University, Punjab.