An Assessment of Resilience during the Covid-19 Pandemic: Some Evidences and Implications from Jammu and Kashmir-India

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Abstract

The COVID-19 pandemic, declared a global health crisis in March 2020, prompted unprecedented global responses to curb its transmission. This paper focuses on Jammu and Kashmir, India, exploring the pandemic's implications in this unique region. The study acknowledges the global context before delving into the distinct challenges faced by Jammu and Kashmir. The pandemic induced transformative changes, notably the shift to remote work and online education. However, its impact on vulnerable sectors, the dynamics of public spaces, and the delicate balance between public health and economic stability were profound. The virus's transmission dynamics, particularly its introduction to India, and the subsequent challenges faced by Jammu and Kashmir due to its geopolitical complexities, form integral aspects of the research. Addressing a research gap, the study employs a comprehensive methodology, including surveys and descriptive statistics, to analyze the social and economic impacts on the local population. The findings contribute to a nuanced understanding of the region's experiences and inform future preparedness and recovery efforts globally.

Introduction

The COVID-19 pandemic, caused by the novel Corona-virus SARS-CoV-2, emerged as a global health crisis in early 2020. Originating in Wuhan, Hubei province of China, the virus spread rapidly leading the World Health Organization (WHO) to declare it as a

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pandemic on March 11, 2020. This declaration was prompted by the virus's unparalleled capacity to traverse international boundaries and its ability to elude containment efforts. The pandemic set in motion a worldwide transformation, prompting nations to institute a wide range of unprecedented measures in an effort to curb the virus's transmission. As this study centers on Jammu and Kashmir, India, this introduction explores the broader COVID-19 landscape before delving into the specific context and implications within this unique region. Wuhan's emergence as the epicenter of the virus marked the beginning of an extraordinary global crisis. This virus swiftly evolved into a formidable adversary, characterized by its high transmission rate and severe health implications; particularly for vulnerable populations. By March 2020, the pandemic had escalated to such an extent that the WHO deemed it necessary to classify COVID-19 as a pandemic, underscoring the urgency of a coordinated international response. This marked the first time a pandemic of this scale had been declared since the H1N1 influenza pandemic in 2009.

COVID-19 led to one of the profound and lasting influence of these transformative changes on various aspects of daily life. Perhaps one of the most noticeable shifts was the widespread adoption of remote work as an alternative to traditional officebased employment. Businesses, both large and small were compelled to adapt to the new reality, reconfiguring operations to accommodate remote work arrangements for their employees. This transition not only reshaped the dynamics of the workplace but also redefined the boundaries between personal and professional life. It presented opportunities for increased flexibility but also introduced unique challenges related to work-life balance, productivity, and technological adaptation. In the realm of education, the COVID-19 pandemic necessitated a rapid transition to online learning platforms. Educational institutions, from primary schools to universities, had to re-engineer their pedagogical methods to ensure that learning could continue in a safe and accessible manner. The shift to online education underscored the importance of technology in the modern educational landscape. While it opened up possibilities for flexible learning and the global dissemination of knowledge, it also revealed the disparities in access to technology and the need for digital literacy among students and educators. Moreover, public spaces that were once vibrant hubs of social interaction and economic activity became deserted as lockdowns and restrictions were imposed to limit physical contact and slow the transmission. This had a profound impact on businesses in the hospitality, entertainment, and service sectors. The pandemic highlighted the vulnerability of certain industries to unforeseen crises and illuminated the need for adaptability and resilience in the face of unexpected challenges. As nations grappled with the multifaceted challenges posed by the pandemic, they faced the complex task of balancing public health with economic stability. Governments around the world implemented a range of measures, from financial stimulus packages to social support programs, to alleviate the economic hardships endured by individuals and businesses. However, these measures came with their own set of challenges, including fiscal constraints, economic disparities, and the need for sustainable long-term strategies. The enduring effects of the COVID-19 pandemic on work, education, and daily routines were not only a response to a global health crisis but also represented a profound shift in how societies functioned. They laid bare the vulnerabilities of existing systems and illuminated the need for resilience and adaptability in the face of future challenges.

The COVID-19 virus primarily spreads through respiratory droplets, a characteristic that significantly contributes to its high contagiousness. Close contact with infected individuals or surfaces contaminated with the virus presents substantial risks. These transmission modes serve as the foundation for understanding the virus's rapid global dissemination. As for the virus's introduction to India, it predominantly occurred through international travellers who unknowingly carried the virus from affected regions. The first confirmed cases in India were reported in January 2020, marking the initiation of the country's battle against the virus. These initial cases triggered alarm bells within the nation and led to the implementation of various preventive measures. India's response included extensive testing, contact tracing, and the imposition of travel restrictions to minimize the further spread of the virus. To gain a comprehensive understanding of the context for our research study, it is imperative to delve into the intricate transmission dynamics and the introduction of COVID-19 into India, with a specific focus on its northern most union territory, Jammu and Kashmir. Within the specific region of Jammu and Kashmir, the virus made its debut in March 2020 when the first confirmed case was recorded. This case served as a poignant reminder of the virus's ability to reach even remote areas and led to a series of containment measures. Jammu and Kashmir, known for its unique geopolitical and geographic complexities, faced distinct challenges in dealing with the pandemic. The region's mountainous terrain, scattered population centres, and the influence of neighbouring countries all added layers of complexity to the response efforts. These regional characteristics played a pivotal role in shaping the trajectory of the pandemic in Jammu and Kashmir. The containment measures were tailored to address the specific needs and vulnerabilities of the local population.

This paper aims to address a significant research gap, which relates to the social and economic impacts of COVID-19 on the population of Jammu and Kashmir, India. Existing studies predominantly focus on the effects of the pandemic in more urbanized areas, often overlooking the distinct challenges faced by those living in regions with specific geopolitical and socioeconomic complexities. The need for this research, highlights the scarcity of studies that delve into the consequences of COVID-19 within the context of Kashmir. This study seeks to shed light on the experiences, vulnerabilities, and resilience of the local population during this global health crisis. It strives to provide a comprehensive understanding of the unique challenges and strengths of the people of Jammu and Kashmir as they navigated the complexities of the COVID-19 pandemic. The study seeks to provide a nuanced understanding of the consequences and resilience demonstrated by the people of Jammu and Kashmir in the face of the COVID-19 pandemic. The distinct circumstances of this region demand a tailored assessment of the social and economic implications of the crisis.

The study conducted surveys to collect primary data from residents of the region. Descriptive statistics was used to analyze the gathered data and derive conclusions. The study tried to analyse the experiences of the people of Jammu and Kashmir during the COVID-19 pandemic, and provide implications that can inform future preparedness and recovery efforts in the region and beyond.

Outbreak of Covid-19 Pandemic

Disease Background

The emergence of the Corona-virus disease 2019 (COVID-19) in late December 2019 in Wuhan, Hubei Province, China, marked the onset of a global health crisis. Initially linked to a seafood and wet animal wholesale market, the outbreak swiftly transcended these origins. Utilizing unbiased next-generation sequencing, an unknown beta Corona-virus was discovered from lower respiratory tract samples, subsequently named 2019–novel Corona-virus (2019–nCoV). This novel virus, later designated Severe Acute Respiratory Syndrome Corona-virus 2 (SARS-CoV-2), posing a formidable public health threat. Phylogenetic analysis uncovered a genetic connection to bat-derived Corona-viruses, exhibiting approximately 88% similarity. Person-to-person transmission rapidly became apparent, extending beyond the confines of the wet animal market and leading to cases within families and individuals not initially linked to the site.(Sudipta Dhar Chowdhury & Anu Mary Oommen, 2020) [1].



Figure 1: Timeline of Important Events between December 2019 to April 2020.

Source: Sudipta Dhar Chowdhury , Anu Mary Oommen (2020). Epidemiology of COVID-19. Thieme Journals

The clinical manifestations of COVID-19 present a spectrum of symptoms, with fever, cough, and fatigue being common initial signs. Additional symptoms include sputum production, headache, haemoptysis, diarrhea, dyspnea, and lymphopenia. Clinical assessments, including chest CT scans, reveal pneumonia, and severe cases can result in complications such as acute respiratory distress syndrome, acute cardiac injury, occasionally leading to fatal outcomes. The World Health Organization's declaration of COVID-19 as a pandemic on March 11, 2020, reflected its global impact. (Figure: 1) The virus's estimated reproduction number (R0) between 2.24 and 3.58 indicated a substantial potential for widespread transmission. The period from symptom onset to death, varying from 6 to 41 days with a median of 14 days, is influenced by factors such as age and

immune system status. Phylogenetic analysis classifies SARS-CoV-2 as a beta-CoV of group 2B, closely related to bat-derived strains, sharing 80% identity with SARS-CoV and 50% with MERS-CoV. This classification underscores the genetic similarity of the virus to Corona-viruses infecting humans, bats, and wild animals. In February 2020, the International Committee on Taxonomy of Viruses and the World Health Organization announced official names for both the virus and the disease it causes: SARS-CoV-2 and COVID-19, respectively. The name of the disease is derived from the words *corona*, *virus*, and *disease*, while the number 19 represents the year that it emerged.

In the examination of the global impact of COVID-19 as of May 2, 2023, a pivotal aspect involves a detailed country-wise analysis. This granular assessment allows for a nuanced understanding of the varied trajectories of the pandemic across different nations. It is essential to note that certain countries with negligible case numbers have been excluded for brevity [2] (Table 1). As of May 2, 2023, the outbreak of the Coronavirus disease (COVID-19) had been confirmed in almost every country in the world. The virus had infected over 687 million people worldwide, and the number of deaths had reached almost 6.87 million. Among the most severely affected countries, the United States of America emerges at the forefront, grappling with a substantial 59,862,833 reported cases. The intricate dynamics of its large and diverse population, combined with complex healthcare challenges, underscore the immense struggle in combating the virus. Following closely is India, reporting 43,289,365 cases, reflecting the unique challenges posed by its vast and densely populated landscape. Brazil, with 34,105,097 cases, secures the third position, emphasizing the global impact on nations with diverse socioeconomic backgrounds. On the flipside, the examination reveals nations that have experienced comparably minimal impact. Nauru, with only 36 reported cases, exemplifies the success of stringent control measures in a small island setting. Tuvalu, reporting a mere 15 cases, further underscores the effectiveness of insular environments in containing the virus. Kiribati, with only 11 cases, rounds out the list of least affected countries. These instances highlight the critical role of early and robust public health responses in mitigating the impact of the global pandemic, offering valuable insights into strategies for future preparedness.

Sl. No	Country/Territory	Total Population	Absolute no. of infected people	%
1	USA	339,996,563	103,436,829	30.42
2	India	1,428,627,663	106,678,503	7.47
3	France	64,756,584	44,949,671	69.41
4	Germany	83,294,633	39,991,340	48.01
5	Brazil	216,422,446	38,403,667	17.74
6	Japan	123,294,513	37,449,418	30.37
7	S. Korea	51,784,059	33,725,765	65.13
8	Italy	58,870,762	31,192,401	52.98

 Table 1: Country-Wise Analysis of COVID-19

			1	1
9	UK	67,736,802	25,788,387	38.07
10	Russia	144,444,359	24,569,895	17.01
11	Turkey	85,816,199	22,855,451	26.63
12	Spain	47,519,628	17,232,066	36.26
13	Vietnam	98,858,950	13,825,052	13.98
14	Australia	26,439,111	11,563,091	43.73
15	Taiwan	23,923,276	11,441,894	47.83
16	Argentina	45,773,884	10,239,998	22.37
17	Netherlands	17,618,299	10,044,957	57.01
18	Iran	89,172,767	8,610,372	9.66
19	Mexico	128,455,567	7,606,689	5.92
20	Indonesia	277,534,122	7,587,421	2.73
21	Poland	41,026,067	6,775,613	16.52
22	Colombia	52,085,168	6,513,902	12.51
23	Austria	8,958,960	6,364,636	71.04
24	Greece	10,341,277	6,065,711	58.66
25	Portugal	10,247,605	5,999,934	58.55
26	Ukraine	36,744,634	5,580,792	15.19
27	Chile	19,629,590	5,518,614	28.11
28	Malaysia	34,308,525	5,284,258	15.40
29	Israel	9,174,520	5,071,840	55.28
30	Belgium	11,686,140	4,821,891	41.26
31	DPRK North Korea	26,185,795	4,793,425	18.31

Source : John Elflein (2023). Number of Corona-virus (COVID-19) cases worldwide as of May 2, 2023, by country or territory. Statista Research Service

Geographic Origins and Spread

The emergence of the COVID-19 pandemic from its origins in Wuhan, China, has evolved into a global crisis of unparalleled proportions. As the virus spread rapidly, nations worldwide grappled with multifaceted challenges that transcended boundaries, affecting diverse populations. China, being the epicentre, faced the initial wave of the crisis, revealing the intricate difficulties in managing emerging infectious diseases within our interconnected world. The zoonotic transmission of the virus underscored the need for swift and comprehensive crisis management, exemplified by the Chinese government's response characterized by stringent lockdowns and extensive testing. These measures provided valuable lessons on an international scale.

Since the initial report from China, the disease spread rapidly, with the first case outside mainland China reported in Thailand on January 11. Within months, the virus reached all continents except Antarctica. India reported its first case of COVID-19 on January

30, 2020. By February 3, three cases had been confirmed, with no additional cases reported that month. However, by mid-March, the number of infected cases started to rise, leading to widespread reports from all over India. The first COVID-19 related death in India was reported on March 12, 2020. By the second week of April, the disease had spread to all states in India except Sikkim. As of the current date, there have been 2,170,265 cases and 135,163 deaths globally, with 15,712 cases and 507 deaths in India.

In the beginning, Corona-virus cases in India were primarily due to abroad connections rather than transmission within the country. The first three infection cases occurred on January 30 and February 3 in Kerala, as individuals returned from Wuhan, China. By March 3, two more cases were reported, one with a travel history from Italy and the other from Dubai. On the same day, additional cases were observed in Jaipur.

As the COVID-19 pandemic unfolded its impact across the vast expanse of India, the union territory of Jammu and Kashmir, situated in the northern part of the country, did not remain immune to the contagion. The initial incursion of the virus into this region was marked by two suspected cases with a high viral load, detected and isolated on March 4, 2020, at the Government Medical College in Jammu. Both individuals, later confirmed as the first positive cases on March 9, had a crucial commonality — a travel history to Iran. This underscores the early pattern observed in India, where the genesis of Corona-virus cases was intricately linked to international travel, reflecting the globalized nature of the virus's transmission pathways.

Fast-forwarding to the latest available data in October 2023, Jammu and Kashmir has witnessed a significant caseload in the course of its battle against the pandemic. The total reported cases stand at 482,034, a testament to the persistent challenges posed by the virus. However, a glimmer of hope emerges in the form of 477, 242 individuals who have successfully navigated the journey from diagnosis to recovery, underscoring the resilience and efficacy of healthcare efforts in the region. Unfortunately, the toll of the virus is also reflected in the reported deaths, numbering 4,792, highlighting the gravity of the situation and the imperative to continually enhance public health measures.[3]

In the broader context of the pandemic's trajectory in India, the experience of Jammu and Kashmir aligns with the national narrative. In the early stages, the primary mode of transmission was through individuals returning from international destinations, echoing the global patterns observed in the spread of the virus. The proactive response of health authorities, as evidenced by the isolation and testing protocols initiated in Jammu and Kashmir in March 2020, mirrors the collective efforts undertaken nationwide to curb the virus's advance. As India grappled with the complexities of the pandemic, interventions such as travel advisories, quarantine rules, and social distancing measures were rolled out, forming a mosaic of strategies to mitigate transmission rates and minimize the impact on public health.

To curb the spread, the Ministry of Health and Family Welfare (MoHFW) issued travel advisory restrictions, imposing self-quarantine rules for 14 days on all international

travelers entering the country. Travel visas were restricted until April 15 for other countries. On March 16, 2020, MoHFW proposed interventions such as social distancing of ≤ 1 m to decrease disease transmission rates, morbidity, and mortality. On March 22, Prime Minister Narendra Modi encouraged people to follow a 14-hour Janata curfew in India. The first phase of a 21-day lockdown commenced on March 24, reducing mobility in grocery and pharmacy, recreation, retail, transit to station visits to parks, and workplaces by significant percentages. Due to the growing infestation from COVID-19, on April 14, the Indian government declared an extended second-phase lockdown until May 3, further extended until May 17, and later imposed until May 31. To make the lockdown and social distancing effective, India also invoked the quarantine law under the Epidemic Disease Act, 1897. [4]

Public Response / Resilience to Pandemic

Implications of COVID-19

Published research that examined the influence of COVID-19 on the community's mental health clearly pinpoints its negative psychological impact. For instance, the research conducted during the early stages of the COVID-19 pandemic (March, 2020) indicated that 36.6% of the 3055 participants experienced psychological distress. Similarly, another research conducted highlighted the impact of the pandemic on the mental health of individuals. These researchers found that the mental health of 78% of their sample deteriorated since the outbreak of COVID-19.

Social support is essential during stressful situations. On the one hand, it positively affects one's mental health, and on the other, it acts as a protective factor reducing the negative psychological impact. Existing literature suggests that in periods of a pandemic, family and friends' perceived support increases. For the study participants were asked to report the support they received from family and friends before the SARS pandemic outbreak, compared to the support they received two months following the outbreak. They found that 28.4% of participants reported increased support from friends (3.8% reported decreased support), and 39.1% of participants reported increased support from family members (1.7% reported decreased support). In addition, they found that for a large proportion of their participants, the expression of emotions towards others and interest in the emotions of others, increased in the period after the outbreak of the pandemic. The increase in social support acts as a significant "cushion" protecting participants from negative mental health impact. Similar results were obtained in another study which examined perceived support from family and friends during the COVID-19 pandemic in China. These researchers found that 64.6% of participants reported increased support by friends and 63.9% reported increased support by family members. In addition, they also found that the expression and interest in the emotions of others increased during the outbreak of the COVID-19 pandemic.

The literature suggests that females are more susceptible to experience negative mental health impact, such as higher levels of distress, anxiety, and depression, during stressful situations. More specifically, in a cross-sectional study of the UK population, Smith et

al. [5] found that females had higher levels of poor mental health during March 2020. Similarly, in their research with the Indian population, Varshney et al. [6] found that females experience the pandemic's greater psychological impact. This finding has been replicated in many countries, such as China, Turkey, Spain, Austria and Australia. The findings from the ongoing research of the non-profit international organization CARE International, which collected data from many countries concerning the impact of COVID-19 in challenging environments, further support this claim concerning females. CARE International has published a number of Rapid Gender Analysis Data that aimed to provide initial analysis on the Gender Impacts. A recently published report of CARE International [7] of almost 10,000 people in 38 countries shows the striking differences between men and women regarding mental health. According to CARE International's findings, while both men and women report experiencing worry, anxiety, and overall emotional fatigue due to the pandemic, women (27% as compared to 10% of men) report suffering from anxiety, inability to sleep, loss of appetite and trouble completing everyday tasks.

Additionally, the area of residency appears to influence the experience of the pandemic. Existing literature suggests that the risk of mental health problems varies depending on whether people live in rural or urban areas. However, there are contradicting results in the literature, and therefore, it is still unclear whether residents in rural or urban areas are more negatively affected by the pandemic. [8]

Individual Protective Measures and Health Practices during the COVID-19 Pandemic

The COVID-19 pandemic triggered a global response, prompting individuals worldwide to adopt an array of preventive measures in a collective effort to safeguard their health and that of their communities. Central to this response was the guidance provided by the World Health Organization (WHO), offering comprehensive recommendations aimed at mitigating the spread of the virus [9].

A critical dimension of the COVID-19 response was the swift and widespread adoption of vaccination campaigns. People globally recognized the importance of receiving vaccines as soon as they became eligible, aligning their actions with WHO guidelines and local health authorities. This concerted effort sought to establish immunity within populations and, consequently, reduce the severity of illness.

In acknowledgment of the highly contagious nature of the virus, individuals adhered to physical distancing guidelines, diligently maintaining a minimum distance of 1 meter from others. Recognizing the challenges of maintaining such distances in certain situations, the correct and consistent use of masks became paramount. Individuals ensured that masks covered the nose, mouth, and chin, supplementing these practices with meticulous hand hygiene whenever handling masks.

Beyond official guidelines, there emerged a noteworthy trend of individuals proactively taking steps to enhance their overall health during the pandemic. This included a heightened emphasis on consuming clean and nutrient-rich foods. A balanced diet was viewed not only as a means of supporting general well-being but also as a potential factor in boosting immune function, gained increased attention.

In the pursuit of minimizing the risk of infection, regular hand hygiene practices became ingrained in daily routines. The use of alcohol-based hand rubs or thorough hand-washing with soap and water became commonplace, contributing to the elimination of germs that might be present on hands. This commitment to hygiene extended to the immediate environment, with individuals frequently disinfecting commonly touched surfaces such as doorknobs, faucets, and electronic devices. Amid the uncertainties of the pandemic, individuals explored various home remedies as supplementary measures to fortify their health. Practices such as gargling with warm water gained popularity, with some believing it could help eliminate viral particles in the throat. While the scientific efficacy of such practices varied, their adoption reflected a widespread desire for proactive health measures. This multifaceted approach to health and safety underscored the adaptability and resilience of individuals facing the challenges posed by the ongoing pandemic. It exemplified not only a response to immediate public health concerns but also a broader societal commitment to collective well-being and the cultivation of resilient communities in the face of unprecedented global health challenges.

People Affected and their Recovery

The research illuminates a compelling narrative in the context of South Asian countries, particularly India, where the convergence of a sizable population and constrained healthcare infrastructure has not translated into the high incidence and mortality rates witnessed in several developed nations grappling with the COVID-19 pandemic. Focused on positive COVID-19 cases reported in India from March 1, 2020, to March 31, 2020, and employing a 25-day follow-up period, the study zeroes in on a critical aspect—the estimation of recovery time. Within this framework, the average recovery time for COVID-19 patients in India emerges as a significant parameter, projecting at 25 days, accompanied by a 95% confidence interval ranging from 16.14 to 33.86 days.

The investigation deepens its exploration by disaggregating recovery time data based on gender and age groups. Notably, male patients exhibit an estimated average recovery time of 23 days (95% C.I. 12.71 to 33.29), while their female counterparts experience a slightly lengthier period at 25 days (95% C.I. 14.65 to 37.34). A granular examination of different age cohorts reveals that patients aged 60 years and above align closely with the overall average, with an estimated recovery time of 25 days (95% C.I. 17.22 to 32.78). In contrast, patients under 60 years of age showcase a shorter estimated recovery time of 21 days (95% C.I. 12.82 to 29.32).

Zooming out from individual demographics, the study also ventures into the distribution of recovery times amidst the broader patient population. An intriguing revelation

emerges here as the recovery duration is diverse, with half of the patients being discharged after 25 days, a substantial portion (40%) experiencing discharge after 20 days, and a minor fraction (4%) being released within the relatively shorter span of 10 days. This distribution underscores the inherent variability in recovery durations within the COVID-19 patient population in India.

Beyond these detailed recovery trends, the study provokes contemplation on the potential strain that the persistently high daily diagnosis rates could impose on India's healthcare system. With approximately eight to nine thousand new cases diagnosed daily and considering the average 25-day recovery period, there arises a legitimate concern about the capacity of the country's limited hospitals, doctors, and medical staff to meet the escalating demand for care. This finding necessitates a thoughtful consideration of strategic planning and resource allocation to effectively navigate the challenges posed by the ongoing pandemic.

In this context, the study makes a robust contribution to the understanding of the nuanced dynamics of COVID-19 recovery in the Indian context. Its findings urge further scientific exploration for comprehensive insights into the factors influencing recovery times, fostering a more informed approach to public health policy and intervention strategies in the face of the persisting pandemic.[10]

Data & Methodology

Our research is anchored in a rich dataset, meticulously gathered through a comprehensive questionnaire designed to explore the multifaceted impacts of COVID-19 on individuals. This primary data is invaluable, as it encapsulates responses from those directly affected by COVID-19, along with insights from their relatives, close contacts, and healthcare workers. Our questionnaire, featuring 33 detailed questions and constructed using Google Forms, covers a diverse spectrum of parameters, including gender, age, country, qualification, occupation, employment type, severity of current health, count of family members, family members affected by COVID-19 (along with their ages), pre-existing medical conditions, and more.

The data collection process spanned 19 days, from September 14, 2023, to October 3, 2023, yielding a dataset with 113 responses. To ensure a comprehensive representation of experiences and outcomes associated with the pandemic, we deliberately engaged a diverse participant pool, including students, residents from different localities, relatives, close contacts, friends, and colleagues.

Our dataset, constituting primary data, mirrors the diverse demographic backgrounds of the respondents. Rigorous efforts were made to enhance reliability and representativeness by including participants from different age groups, educational qualifications, and family structures. This deliberate selection of respondents from various walks of life enriches the depth and diversity of our dataset. The parameters captured in our questionnaire cover a wide array of aspects, from health outcomes and COVID-19

implications to post-COVID health outcomes and broader societal implications. These parameters include severity of health, family impacts, pre-existing conditions, vaccination status, lifestyle changes, financial impacts, and perceptions of technology and social media during and after the COVID-19 period.

Results & Discussions

In the Jammu and Kashmir region, the impact of COVID-19 reveals a stark genderbased disparity, where 63% of cases affect males compared to 37% among females. This gender imbalance can be attributed to prevailing societal roles, where men typically bear the primary responsibility as breadwinners, necessitating their sustained exposure to external environments regardless of prevailing conditions. This inherent need to provide for their families is a significant factor contributing to the higher percentage of male Covid-19 cases. Moreover, additional factors, including the perceived behaviour of men and the declining health status of males in India, as corroborated by studies like George M. Bwire (2020) [11] and J. Fabião et al. (2022) [12], also play a role in this gender disparity. Nevertheless, it's crucial to acknowledge that women in the region actively engage in various forms of employment and daily activities, and their increased exposure to the virus, given its highly communicable nature, may account for the rise in female infections. This discrepancy is rooted in societal roles, with men, typically primary breadwinners, facing heightened exposure due to sustained engagement in external environments. Factors such as perceived male behavior, declining health status, and women's increased activity contribute to this gender gap. Simultaneously, the distribution of cases significantly skews towards younger age groups, notably 15-25 and 26-35, accounting for 51.8% and 39.3% of infections, respectively. In contrast, the remaining age categories exhibit markedly lower infection rates, with 36-45 year-olds at 4.5%, 46-55 year-olds at 2.7%, and those above 55 years of age at 1.8%. This significant variation can be attributed to the characteristics of the younger age groups, particularly those between 15-35, who tend to exhibit a more carefree and casual approach to potentially serious situations. This elevated rate of infection among young adults can be associated with their higher mobility and propensity to venture outdoors, supported by research findings in a study by India Today[13]. They often disregard advice from elders and healthcare professionals, as indicated in a study conducted by The Indian Express [14]. Their carefree approach and higher mobility contribute significantly to their infection rates. A comprehensive breakdown of the educational qualifications of individuals affected by Covid-19 is concentrated in the below UG, UG, and PG categories, representing individuals primarily within the age group of 15–35 sometimes even forgoing the use of masks. In contrast, individuals with PhD & above qualifications are predominantly situated in the age group of 35 and older, typically displaying a heightened awareness of the seriousness of the situation and a greater propensity to adhere to guidelines issued by healthcare organizations, medical professionals, and government authorities. This interplay between educational qualifications and age groups underscores the influential role of education in shaping compliance with pandemic measures. It was observed that full-time employees, parttime workers, and freelancers face substantial impact, potentially due to varying levels of daily interactions. A high proportion of freelancers contracting the virus raises questions, possibly linked to the prevalence of freelancing among young adults, a group we have identified as significantly affected. It's essential to address gender disparities in full-time and part-time employment, as indicated by the research of David Richardson and Richard Denniss (2020) [15], showing a male majority in full-time roles and significant female representation in part-time positions. The rapid decline in part-time work, particularly impacting women, resulted in them staying home and being relatively safe. Furthermore, the study by Alison Aughinbaugh and Donna S. Rothstein (2022) [16] supports this observation by demonstrating that men are more likely to work full-time compared to women and have less access to remote work, a significant factor influencing the high infection rates among full-time workers. The sample data also highlights gender disparities in employment, contributing to higher infection rates among men. Overall, these analyses underscore the intricate interplay of gender, age and employment status, shaping the distribution of COVID-19 cases in the region, revealing multifaceted influences on infection rates across different demographic groups.

Count	%
1	0.9
2	2.8
3	6.7
4	20.5
5	47.9
6	13
7	8.4
8	2.8
Total	100

Table 2: Count of Family Members

Table: 2 illustrates the distribution of family member counts among individuals impacted by COVID-19. Notably, a significant 81.4% of cases are associated with family sizes of 4, 5, or 6 members, suggesting that these family configurations might be more susceptible to the virus due to their inherent dynamics. In contrast, smaller families, reflected by the lower percentages for counts seem better equipped to maintain social distancing and reduce exposure. Consequently, the correlation between family member counts and COVID-19 cases underscores the critical role of household size in virus transmission, with higher family sizes of demonstrating the highest vulnerability to infection. The data also indicates that households with 7 or 8 members exhibit a relatively lower percentage of COVID-19 cases, with 7 members representing 8.4% and 8 members representing 2.8% of cases. This lower prevalence in larger households may be attributed to the fact that such family sizes constitute a smaller proportion of the overall population, in line with a study conducted by Global Data that reported

Source: Author's compilations from primary data

India's average household size as 4.44 people in 2021 [17]. Consequently, the data reveals a non-linear relationship between family size and COVID-19 cases, with higher prevalence in households comprising 4, 5, or 6 members and relatively lower incidence in families with 7 or 8 members.

Sl. No	Current health	%
1	Fully recovered	93.3
2	Partially recovered	6.7
3	Not recovered	0
	Total	100

 Table 3: Severity of Current Health

Source: Author's compilations from primary data

The data presented in Table 3 shows the current health status of individuals affected by COVID-19. Notably, a substantial 93.3% of the cases reflect full recovery, underscoring the resilience and effective medical interventions that contribute to the majority of patients overcoming the virus's effects. This positive trend aligns with findings from a study by Akancha Singh and Aparajita Chattopadhyay (2021) [18], emphasizing the significance of factors like death rate, hospitalization, healthcare quality, and discharge policies in determining a country's recovery rate. In this context, India's recovery rate has shown a steady increase, highlighting the improvements influenced by healthcare investment, urban living conditions, non-slum and non-poor populations, and effective governance. Moreover, the absence of cases indicating "not recovered" (0%) is a reassuring sign, underlining the importance of real-time monitoring and reporting of health outcomes. This information is invaluable for healthcare professionals, policymakers, and the broader public in understanding the evolving dynamics of the pandemic and the success of recovery efforts.

Table 4 summarizes the extent to which different family members were affected by COVID-19, providing a glimpse into the familial dynamics during the pandemic. The data signifies the varying degrees of impact on family members and their susceptibility to contracting the virus. Notably, the data reveals that sister-in-laws were the most affected among the listed family members, with 11.6% reporting COVID-19 infections, possibly due to their extensive involvement in family activities and interactions. Samia Hanif foundwomen in Kashmir often find themselves in the position of being the sole manager of the household, sole parent, or caretaker of elders, which can lead to increased suffering [19]. Mother-in-laws (10.6%) were the second most affected, possibly because of their close-knit roles in household responsibilities. In contrast, spouses (2.9%) had a lower infection rate, likely owing to their reduced exposure, and a notable 11.6% reported that no family member was affected, indicating that some households managed to shield themselves effectively from the virus. This data underscores the critical role of family structures and interactions in the spread of the virus within households and can serve as a valuable resource for understanding transmission patterns and developing targeted preventive measures. It reflects the intricate web of relationships and contact dynamics within families, shedding light on the vulnerabilities and safeguards that different family members experienced during the pandemic. This understanding is pivotal for improving public health strategies and strengthening protective measures to mitigate the impact of COVID-19 within households.

Sl. No	Relation	%	Total %
1	Father/in-law	8.7	100
2	Mother/in-law	10.6	100
3	Spouse	2.9	100
4	Brother/in-law	6.7	100
5	Sister/in-law	11.6	100
6	Grandfather	3.8	100
7	Grandmother	1.9	100
8	Children	3.8	100
9	Others (nephew, uncle, aunt)	1.9	100
10	None	11.6	100

 Table 4: Family Members Affected

Source: Author's compilations from primary data

Table 5 shows the presence of pre-existing medical conditions among the surveyed individuals, thus revealing the prevalence of underlying health concerns within the context of COVID-19 infections. About 10.7% of the respondents acknowledged having pre-existing conditions, while a substantial 89.3% reported not having such underlying health issues. These pre-existing conditions encompass a range of chronic ailments, such as diabetes, hypertension, respiratory disorders, or cardiovascular diseases, all of which have been recognized as factors that may elevate an individual's vulnerability to severe COVID-19 complications. These findings align with the results of various studies, including one conducted by Colin Pawlowski et.al [20] that demonstrated higher rates of pre-existing conditions, such as acute kidney injury, anaemia, and cardiac arrhythmias, among hospitalized COVID-19 patients who were readmitted to the hospital after viral clearance. This implies that pre-existing conditions served as risk factors for postclearance COVID-19 complications necessitating hospitalization. Several meta-analyses have also identified individuals with pre-existing medical conditions like cancer, cerebrovascular disease, type 2 diabetes mellitus, chronic obstructive pulmonary disease (COPD), hypertension, and chronic kidney disease as being at higher risk of contracting COVID-19. However, it's important to note that in Kashmir, hospitalizations and the severity of cases remained relatively low. As a result, we can infer that the population with pre-existing conditions in the region may have been comparatively safeguarded from COVID-19's severe impact. These insights are valuable for understanding the interplay between pre-existing conditions and COVID-19 outcomes.

Table 5. 1 re-Existing Conditions				
Pre-existing conditions	%			
Yes	10.7			
No	89.3			
Total	100			

Table 5: Pre-Existing Condition	Table	5: Pro	e-Existing	Con	dition
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Source: Author's compilations from primary data

However there has been a stark contrast in hospitalization rates among respondents, with a significant 95.5% indicating they did not require hospitalization (Table: 6). This divergence can be attributed to various factors, primarily the relatively lower death rate in Kashmir, which led many individuals to believe that hospitalization was unnecessary. This perception is corroborated by data from the Government of India's state-wise COVID-19 patient dashboard, which reports that Jammu and Kashmir had a total of 482,034 COVID-19 patients, with 477,242 recoveries and 4,792 deaths [21]. Additionally, the cases in Jammu and Kashmir displayed less severity, as reported by Irfan Tramboo in 2021, highlighting almost zero hospitalizations in the region due to milder COVID-19 symptoms [20]. The data underscores the significant impact of the local context and the perceived virus severity on individuals' decisions regarding hospitalization during the COVID-19 pandemic, emphasizing the importance of region-specific factors in healthcare decisions.

Table 0. Hospitalization Required				
Hospitalization required	%			
Yes	4.5			
No	95.5			
Total	100			

Table 6: Hospitalization Required

Source: Author's compilations from primary data

The study also found persisting symptoms experienced by individuals after their recovery from COVID-19. It indicates that 14.3% of respondents was observed reported enduring symptoms, while a substantial majority of 85.7% did not experience any post-recovery issues. These findings highlight the phenomenon commonly referred to as "long COVID" or "post-acute squeal of SARS-CoV-2 infection" (PASC), emphasizing that the impacts of the virus can extend beyond the initial acute phase of the illness. Lingering symptoms can encompass a broad spectrum, ranging from fatigue and respiratory difficulties to cognitive impairments. Additionally, studies by Amy D. Proal and Michael B. VanElzakker [22] suggest that a variety of additional biological factors, including alterations in host micro biome composition and activity, contribute to PASC cases, where SARS-CoV-2 infection may initiate or exacerbate various biological irregularities in diagnosed patients. Recognizing the prevalence of these persistent symptoms is critical for healthcare providers and policymakers to deliver appropriate care and support to COVID-19 survivors and prepare for the potential long-term health consequences of the pandemic.

Lingering symptoms	%
Yes	14.3
No	85.7
Total	100

Table 7: Lingering Symptoms since Recovering from COVID-19

Source: Author's compilations from primary data

•	
Affected by	%
Ist wave	14.5
2nd wave	38.2
Both waves	10.9
Not affected	36.4
Total	100

Table	8:	Affe	cted	by	Which	Wave
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Source: Author's compilations from primary data

Another important determinant has been the waves of the COVID-19 pandemic that affected respondents in Jammu and Kashmir, shedding light on the underlying reasons for these impacts. Notably, the data reflects a pattern where the second wave had a more significant impact on participants compared to the first wave, a trend that can be directly attributed to the alarming surge of COVID-19 cases witnessed in India during the second wave. This stark contrast is reinforced by findings from a study by <u>Kapil G Zirpe</u> et.al [23] indicating a substantial increase in both ICU and hospital mortality rates at 7 and 14 days for patients admitted to ICUs in western Maharashtra during the second wave of the pandemic, underscoring the severe healthcare crisis during that period. Conversely, the 36.4% of respondents who remained unaffected by either wave can be partly attributed to the relatively lower number of COVID-19 cases in Kashmir.

An important aspect in this regard is how respondents in Jammu and Kashmir adhered to different COVID-19 preventive recommendations (Table: 9). Notably, a remarkable 96.3% of participants reported consistent mask-wearing, showcasing a commendable commitment to this fundamental preventive practice. Furthermore, 77.8% of the respondents dilligently adhered to hand hygiene by washing their hands for a minimum of 30 seconds and regularly using hand sanitizers, reflecting the widespread recognition of the significance of these practices in reducing viral transmission. It's worth mentioning that 60.2% indicated that they routinely sanitized gates and their habit of supplementing their health by taking essential vitamins, potentially boosting their immune systems. Nonetheless, these statistics reveal scope for enhancement in compliance with preventive measures, mirroring findings from another study conducted by <u>Kumar Saurabh & Shilpi Ranjan</u> [24] that underscored the suboptimal overall adherence of 7.43%. Interestingly, adherence rates varied between guidelines, with higher compliance observed in measures aimed at preventing community transmission

(17.35%) than those focusing on household transmission (10.71%). The distinct patterns of compliance among children and adolescents, with relatively lower adherence rates, raise concerns as they could potentially pose risks to their families and communities. In line with prior research done by Dr. <u>Sabina Kleitman</u> [25], The present study shows that individuals more likely to comply with COVID-19 restrictions tend to be younger, educated, or face higher health risks. They exhibit qualities such as being female, experiencing elevated worry, and holding trust in government-mandated protective measures. They also demonstrate constructive coping strategies for stress and anxiety, including distraction and planning. Conversely, the non-compliant segment, which is characterized by being predominantly male, less agreeable, less inclined toward intellectual curiosity, and more extroverted, tends to engage in riskier behaviors, such as socializing with friends or family, attending religious gatherings, pursuing leisure activities due to boredom, or asserting their freedom to move about.

Followed	%	Total
Wearing mask	96.3	100
Washing hands for 30 seconds or longer	77.8	100
Constantly using sanitizer on hands	77.8	100
Sanitizing gates and your home	60.2	100
Taking essential vitamins	42.6	100

Table 9: Followed all the COVID-19 Instructions Issued by WHO

Source: Author's compilations from primary data

The study tried to get an insight into the psychological distress experienced by COVID-19 patients in Jammu and Kashmir, revealing the profound impact of the pandemic on their mental well-being (Table: 10). Notably, 27.3% of patients reported experiencing extreme anxiety, a significantly high level attributable to the unprecedented and uncertain nature of COVID-19. In contrast, 19.1% described their anxiety as mild, suggesting a relatively more manageable level of psychological distress. An additional 15.5% of respondents acknowledged experiencing anxiety to varying degrees, signifying a moderate level of distress, likely tied to concerns about health, the well-being of loved ones, and the economic implications of the pandemic. It is noteworthy that 11.8% of patients reported experiencing notable anxiety levels marked as "8," while an additional 8.2% reported an anxiety level of "6." Furthermore, 4.5% of patients experienced anxiety levels represented by scores "1," "3," and "4," underscoring the diverse spectrum of distress levels prevalent among COVID-19 patients in the region. Research studies conducted by Sheikh Shoib (2020) [26] revealed that 45% of Kashmir's adult population (1.8 million) experienced some form of mental distress, with preventive measures like social distancing potentially exacerbating feelings of loneliness and neglect, particularly among the elderly population, leading to mental health issues. Additionally, research by Bilal Ahmad Bhat et al. on the people of Jammu and Kashmir concluded that 55% of respondents exhibited anxiety symptoms, 55% displayed depressive symptoms, around 53% reported poor quality of sleep, and approximately 30% employed maladaptive coping skills (2020) [27]. These findings further emphasize the profound psychological

impact of the pandemic and underscore the necessity of prioritizing mental health support for individuals affected by COVID-19.

Least anxious				I	Most a	nxious				
Anxiety level	1	2	3	4	5	6	7	8	9	10
Percentage of people	4.5	0.9	4.5	4.5	19.1	8.2	15.5	11.8	3.6	27.3

Table 10: Anxiety Level



Source: Author's compilations from primary data

Figure 2: Rating of Overall Health since Recovering from COVID-19



Source: Author's compilations from primary data

A hierarchical rating of health of respondents is shown in Figure: 2 since recovering from COVID-19. Almost 54.5% of participants reported their overall health as "excellent," signifying a significant number of individuals who experienced robust recovery post-infection. An additional 33.9% rated their health as "good," reflecting a positive trajectory for a substantial portion of respondents. However, it is crucial to acknowledge that some individuals faced post-recovery health challenges, with 8% rating their health as "fair" and 3.6% rating it as "poor." These findings echo the results of studies such as the one conducted by the WHO [28], emphasizing that while

most people fully recover from COVID-19, around 10–20% experience mid and longterm health effects following their initial illness. This variation in post-recovery health highlights the necessity of tailored healthcare support and underscores the importance of ongoing research and monitoring.

Table 11 shows the status of body weight among respondents after their recovery from COVID-19. This table provides crucial insights into the physical well-being of individuals who have experienced the virus and the subsequent changes in their weight. Notably, the majority of respondents, at 67%, reported no significant change in their weight, a finding that may be linked to the relatively lower COVID-19 cases in the region, suggesting that a considerable portion of the population remained unaffected by the virus. However, the table also highlights that some individuals experienced a reduction in their weight, with 17% reporting weight loss. This decrease in body weight is an important observation and could be associated with the toll that COVID-19 takes on patients. Many people who contract the virus report experiencing weight loss, particularly muscle loss, a condition known as "cachexia." A study reviewed by Darragh O'Carroll [29] found that 30% of COVID-19 patients 1 month after hospital discharge had lost more than 5% of their baseline body weight. More than half were at risk for malnutrition, suggesting that COVID-19 may lead to weight loss and nutritional issues. Conversely, 16.1% of respondents reported an increase in their weight. This increase in body weight may be linked to efforts to regain weight lost during COVID-19 infection, as supported by another study conducted by Luigi Di Filippo et al. [30], which concluded that COVID-19 might negatively impact body weight and nutritional status. Some individuals may have faced muscle loss during their illness, and the desire to rebuild muscle mass and regain lost weight could account for this observed increase. Studies [31] also propose various methods for regaining weight lost due to illnesses, such as consulting with nutritionists or healthcare professionals, considering medications that stimulate appetite, or following specific caloric intake guidelines. Another reason for the weight gain is the lethargic lifestyle people had to abide by during nation-wide lockdowns and restrictions. During pandemic, almost negligible people were involved in exercises and physical activities.

0	
Status	%
Increased	16.1
Decreased	17
No change	67
Total	100

Table 11: Status of Weight since Recovering from COVID-19

Details regarding how sample respondents from Jammu and Kashmir perceived their immunity changing following their recovery from COVID-19 are shown in Table: 12.The data reveals that a significant majority, 65.2%, reported a sense of improved immunity following their recovery, while 34.8% did not report any noticeable

Source: Author's compilations from primary data

improvement. The increased sense of immunity among respondents may be attributed to natural immunity developed after contracting COVID-19. Natural immunity involves the body's production of antibodies that can specifically recognize and neutralize the virus. Research has shown that natural immunity can be robust and long-lasting, although it can vary among individuals and may decline over time. Jennifer Abbasi's [32] study emphasizes the potential for lasting immunity after COVID-19, which can be significantly augmented by vaccination. This suggests that individuals who have recovered from COVID-19 may have strong and durable protection against reinfection. Stefan Pilz's et al. [33] study also supports the idea that natural immunity can provide substantial protection against re-infection, even with the presence of various SARS-CoV-2 variants.

Table 12: Improvement in Immunity since Recovering from COVID-19

Improved	%
Yes	65.2
No	34.8
Total	100

Source: Author's compilations from primary data

Vaccinated	%
One dose	58.3
Both doses	12
None	29.6
Total	100

Table 13: Vaccination Status

Source: Author's compilations from primary data

Table: 13 provides information on the vaccination status of sample individuals within the age groups of 15 to 70 in Jammu and Kashmir. The data outlines the extent to which these individuals have received COVID-19 vaccines, shedding light on the vaccination coverage in the region. In particular, it reveals that 58.3% have received at least one vaccine dose, while 12% have completed their vaccination regimen with both doses. However, a notable portion, 29.6%, remains unvaccinated. To understand the factors contributing to these vaccination rates, one has to consider the broader context. The hesitancy toward vaccines in the population of Kashmir is an important element to consider. A study conducted by Syed Najmul Ain et al. [34] has quantified this hesitancy, identifying that concerns about the safety of COVID-19 vaccines (67%) and a lack of trust in vaccine manufacturers (15%) are the primary reasons for complete non-acceptance of vaccination or extensive vaccine hesitancy. This suggests that efforts to address safety concerns and build trust in vaccine manufacturers are essential to enhancing vaccine acceptance. Additional, disparities in vaccination coverage may be attributed to varying levels of education and awareness within the population. The prevalence of misinformation and rumours surrounding vaccines can contribute to

hesitancy. On a positive note, the government had taken proactive steps to increase vaccination rates by implementing compulsory vaccination requirements for employees and students. These measures have played a pivotal role in boosting vaccine uptake.

Figure 3 represent the additional health complications faced by sample respondent.

Figure 3: Additional Health Complications Faced by Sample Respondent



Table 14 : COVID-19 Technological Perception

Perception	%
Embraced technology more	41.1
Used technology and traditional methods equally	38.3
Reverted to traditional methods	3.7
Prefer not to say	16.8
Total	100

Source: Author's compilations from primary data

Table 14 sheds light on the profound societal shift towards increased technology integration during the COVID-19 pandemic. The data vividly illustrates a notable surge in technology adoption, with 41.1% of respondents indicating that they embraced technology to a greater extent. A substantial contributor to this surge is the widespread adoption of the Work from Home (WFH) [35] and online education culture across the globe, revealing the adaptability of individuals to the digital realm. Moreover, studies suggest that individuals born during the pandemic, colloquially known as "Covid babies," exhibit a natural inclination towards technology. [36]. Additionally, the economic repercussions of the pandemic led to job losses [37], but many found new opportunities as content creators, primarily on platforms like TikTok and YouTube. These shifts in behavior also extended to seeking COVID-related information, daily updates, home remedies, and personal experiences. It is noteworthy that 38.3% of respondents reported balancing technology with traditional methods, highlighting

a nuanced approach to staying connected and informed. This phenomenon partly stems from the desire to reduce screen time and strengthen familial bonds, as people discovered more leisure time.

Status	%
Increased significantly	39.8
Increased somewhat	16.7
Stayed the same	29.6
Decreased somewhat	4.6
Decreased significantly	0.9
Prefer not to say	8.3
Total	100

Table 15: Post COVID-19 Social Media Engagement Status

Source: Author's compilations from primary data

An important behavioural change during the period was the post-COVID social media engagement of sample individuals (Table 15). It was found that, 39.8% reported a significant increase in their social media engagement, reflecting the continued prominence of these platforms in people's lives. An additional 16.7% experienced a moderate increase, further underscoring the enduring relevance of social media. Meanwhile, 29.6% indicated that their engagement remained unchanged, suggesting a stable relationship with these online networks. A smaller percentage, 4.6%, reported a slight decrease, possibly due to a shift in priorities or changing routines. Only 0.9% reported a significant decrease, indicating that social media remains integral to most individuals in the region. Additionally, 8.3% chose not to disclose their engagement status, reflecting personal preferences for privacy. These findings align with broader trends in social media engagement observed globally. During the COVID-19 pandemic, social media served as a vital communication tool, enabling individuals to stay connected with friends and family during times of physical distancing and lockdowns. It facilitated the sharing of information, emotional support, and entertainment, making it an essential component of people's lives during the crisis. Global statistics [38] show that users spent an average of 2 hours and 27 minutes per day on social media in 2023, up from 2 hours and 22 minutes in 2022. The data suggests that even as the world began to reopen, people continued to allocate a significant portion of their daily routines to social media activities. This is also due to the social media addiction during COVID-19 which does not seem to waver off so easily even after COVID-19. This trend demonstrates the lasting impact of the pandemic on online behavior.

The findings presented in Table 16 shed light on criminal activities observed and reported by sample respondents. 7.4% of the respondents reported instances of theft, which is the highest percentage among all categories. This could be attributed to the economic challenges posed by the COVID-19 pandemic. The lockdown measures led to financial hardships for many households, especially when the region already faced alarmingly high unemployment rates. A study conducted by Soumya Bhowmick and

Suyash Das [39] found that during the pandemic, there was an increase in economic crimes, including theft, in many parts of the world. The economic hardships faced by the population can lead to an upsurge in theft-related incidents in addition to theft, domestic violence is reported at 3.7%. The COVID-19 pandemic and associated lockdowns and restrictions created a stressful environment for many families. Increased time spent at home and potential financial difficulties have been linked to higher stress levels, which contributed to domestic tensions and conflicts. A study conducted by Anayat Ul Lah Mugloo, Imran Ahmad Khan et al. [40] found that job loss suffered due to COVID-19 lockdown led to increased acts of domestic violence in Kashmir. These findings underscore the multifaceted impact of the pandemic on various aspects of society, including the socio-economic and interpersonal dimensions.

Status	%
Street fight	1.9
Harassment	1.9
Domestic violence	3.7
Theft	7.4
Other	3.7

Table 16: Criminal Activities Observations

Source: Author's compilations from primary data

There has also been substantial financial impact of the COVID-19 pandemic on Kashmir, a region already grappling with economic challenges. The sample data (Table 17) shows that 2.8% of respondents reported an improvement in their financial condition. However, a significant proportion of respondents, 30.8%, indicated that there was no significant change in their financial situation. In contrast, 27.1% reported that their financial condition had slightly worsened, while another 30.8% reported that it had significantly worsened. Additionally, 8.4% of respondents preferred not to disclose their financial status. The pandemic has further exacerbated these pre-existing issues, leaving a lasting imprint on the region's economic landscape. One of the sectors most severely affected by the pandemic is tourism, a cornerstone of Kashmir's economy. Kashmir relies heavily on revenue from tourists, but the pandemic has led to a sharp decline in tourist arrivals, resulting in significant losses for the tourism sector and its associated businesses. Another critical component of the Kashmiri economy is the handicraft industry, known for its exquisite products like carpets, shawls, and papiermâché items. However, the pandemic disrupted the supply chain and reduced demand for these products, severely impacting the livelihoods of Kashmiri artisans and related businesses. The economic repercussions of the pandemic extend beyond tourism and handicrafts, affecting other sectors such as agriculture, manufacturing, and trade. Disruptions in supply chains, a decline in demand, and operational challenges have led to job losses and reduced incomes for many in Kashmir. Several studies underscore the magnitude of the economic losses and increased unemployment rates during the pandemic. The Kashmir Chamber of Commerce and Industry reported a staggering loss of Rs 50,000 crore due to the pandemic in 2020-21. The tourism sector, contributing approximately 15% to Kashmir's GDP, experienced a 70% decline in tourist arrivals in 2020-21, as indicated by studies conducted by Lone et al. and Showkat Ahamd Dar and Naseer Ahmad [41]. Furthermore, Bilal Ahmad et al. [42] found that the handicraft industry, which employs over a million people in Kashmir, reported a 50% decline in sales during the same period. Kashmir's unemployment rate surged from 7.4% in 2019 to 15.5% in 2020, exacerbating the economic challenges faced by the region. Kashmir now confronts the ongoing challenge of economic recovery while addressing these pressing concerns.

Status	%
Improved	2.8
No significant change	30.8
Slightly worse	27.1
Significantly worse	30.8
Prefer not to say	8.4
Total	100

Table 17: COVID-19 Impact on Financial Condition

The statistics presented in Table 18 provide insights into the recovery status of financial losses in Kashmir resulting from the COVID-19 pandemic. It is noteworthy that 54.5% of the respondents reported that they have completely recovered from the financial setbacks they experienced during the pandemic. These individuals likely faced minimal financial hardships during the pandemic or had robust strategies in place for recuperation. In contrast, 26.7% mentioned partial recovery, suggesting that they have made progress but continue to grapple with economic challenges. The remaining 18.8% acknowledged that they have not yet recovered from these economic challenges, indicating that they are among the significantly affected individuals who continue to face financial difficulties. The slow but steady recovery in these areas indicates the broader context within which the respondents' financial recovery status can be understood. The Jammu and Kashmir Tourism Development Corporation (JKTDC) reported a 20% increase in tourist arrivals in the first quarter of 2023 compared to the same period in 2022. Furthermore, there has been a 10% rise in new business registrations in the region during the first nine months of 2023, in comparison to the same period in 2022, [43] which signifies promising economic progress and reconstruction efforts.

Status	0/0
Completely recovered	54.5
Partially recovered	26.7
Not yet recovered	18.8
Total	100

Table 18: Financial Losses Recovery Status

Source: Author's compilations from primary data

Source: Author's compilations from primary data

The quality of life in Kashmir was affected by the COVID-19 pandemic (Table 19). The data reveals that 27.1% of respondents reported significant changes in their lifestyles, while 46.7% mentioned experiencing some degree of alteration. For 22.4%, their lifestyles remained largely unaffected, while 3.7% chose not to disclose their response. These findings align with studies conducted during the pandemic. A study by Dimple Rawat et al. [44] indicated that lifestyle was profoundly impacted by COVID-19, with weight gain observed due to changes in daily routines. The study also highlighted a negative shift in sleep patterns, a matter of concern reflected in the data. Dr. Divya R Nair's [45] research explored the influence of lockdown on lifestyle, psychosocial stress, and quality of life (QOL). The study revealed that lockdown had a significant effect on lifestyle, leading to increased psychosocial stress. However, it also showed that people continued to experience a fair QOL during this challenging period.

Quality of changed	%
Yes, significantly	27.1
Yes, to some extent	46.7
No, not really	22.4
Prefer not to say	3.7
Total	100

Table 19: Quality of Life

The Covid -19 also impacted eating habits. The data given in Table 20 reveals that 25.7% of respondents reported significant changes in their eating habits, while 40.4% mentioned experiencing some alterations in their dietary routines. For 31.2%, there was minimal to no impact on their eating habits, while 2.8% preferred not to disclose their response. These statistics align with findings from various studies conducted during the pandemic. Research by Waseem N. Ahmed et al. [46] highlighted that over 80% of participants reported unchanged physical activity and dietary habits. However, there was a notable increase in the consumption of vegetables (80.9%) and fruits (42.7%), coupled with a reduction in unhealthy snacking (63%). This shift toward healthier eating habits likely corresponds to an increased focus on boosting immunity during the pandemic. Another study conducted by Paul G et al. [47] reported an increased consumption of fruits, particularly for their immunity-boosting properties. Furthermore, a rise in the intake of vitamins, herbal tonics, and a growing trend of adopting a vegan diet were observed as individuals proactively sought to enhance their overall health. These findings signify that individuals in Kashmir, like many others globally, recognized the importance of nutrition and dietary choices in supporting their overall well-being during the pandemic.

Source: Author's compilations from primary data

Changed	%
Yes, significantly	25.7
Yes, to some extent	40.4
No, not really	31.2
Prefer not to say	2.8
Total	100

Table 20: Eating Habits Changed

Source: Author's compilations from primary data

Altered	%
Yes, significantly	30.9
Yes, to some extent	20
No, not really	41.8
Prefer not to say	7.3
Total	100

Table 21: Travel Patterns Altered

Source: Author's compilations from primary data

The Pandemic also affected and transformed travel patterns among Jammu and Kashmir residents. Approximately 30.9% of respondents reported substantial alterations in their travel routines, a change primarily induced by the stringent lockdown measures that led to cancelled trips and a significant reduction in non-essential travel (Table 21). Notably, this group was largely reliant on public transport, and a preliminary study conducted by Sheikh Nadeem Qasim and Ashish Kumar (2023) [48] indicated that the local public transport sector suffered severe setbacks during the pandemic. Public transport restrictions and various control measures, such as school closures, restrictions on large gatherings, and the avoidance of public spaces, had an immediate impact on travel patterns, causing many people to postpone or cancel nonessential travel and pushing a majority to work from home or face temporary unemployment. An additional 20% experienced partial adjustments in their travel behavior due to the evolving circumstances and safety concerns linked to COVID-19. Conversely, a significant 41.8% indicated that their travel patterns remained largely unaffected, possibly due to the relatively lower death rate in Kashmir, leading some to perceive the virus as a less severe threat. Lastly, 7.3% of respondents chose not to share their experiences. The insight provides a comprehensive understanding of the ways people responded to a crisis that fundamentally altered their daily lives, which is essential for informed pandemic responses, future preparedness, and reshaping the travel industry in a postpandemic landscape.

Coping Mechanism and Resilience

People in Kashmir have developed resilience and coping mechanism due to regular unrest and curfews, which are not an unfamiliar concepts to them, hence they were not greatly impacted by the country-wide lockdowns. People in Kashmir were suffering in 2016 under a six-month curfew with no internet. And just one year prior to COVID, Article 365 was repealed, which led to the curfew that covered the entirety of Kashmir and included no connectivity. People were forced to stay at home by army forces stationed at every gate. Thus, the premise of COVID-19 remained the same; in fact, for Kashmiris, access to the internet and connectivity was far easier than for the rest of the country.

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