

**A DESCRIPTIVE STUDY TO ASSESS POST-COVID IMPACT ON PHYSICAL AND PSYCHOLOGICAL HEALTH AMONG THOSE PERSONS WHO HAVE RECOVERED FROM COVID-19 AT SELECTED HOSPITAL JODHPUR**

**Himmta Ram<sup>1\*</sup> and Surendra Choudhary<sup>2</sup>**

<sup>1</sup>Sr. Nursing Officer, M. G. Hospital, Dr SN Medical College Jodhpur.

<sup>2</sup>HOD, Community Health Nursing, GCON Jodhpur.

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\*Corresponding Author: Himmta Ram

Sr. Nursing Officer, M. G. Hospital, Dr SN Medical College Jodhpur.

**ABSTRACT**

**Introduction:** The COVID-19 pandemic has unleashed unprecedented challenges globally, affecting millions worldwide with its long-term repercussions even post-recovery. This study aims to delve into the post-COVID impact on physical and psychological health among recovered individuals in Jodhpur, India, shedding light on the association with demographic variables. **Methodology:** Employing a quantitative cross-sectional design, this research assessed the post-COVID impact on physical and psychological health among 190 recovered COVID-19 patients in Jodhpur. Structured surveys were utilized to collect data, allowing for the exploration of demographic characteristics, physical symptoms, and mental health status. **Result:** The study, comprising 190 COVID-19 recovered individuals, found varying impacts on physical and psychological health, with notable associations with age and living area. While 64.7% reported no physical impact, 75.8% reported no psychological impact. Significant correlations existed between physical and psychological health ( $r = 0.318$ ,  $p < 0.05$ ). Demographic factors such as age and living area were associated with these impacts, underlining the nuanced post-COVID-19 outcomes. **Conclusion:** This study underscores the enduring impact of COVID-19 on physical and psychological health in recovered individuals, emphasizing the need for targeted interventions, particularly for those experiencing mild issues. Significant associations with demographic factors like age and residential area highlight the importance of tailored approaches, while the correlation between physical and psychological health underscores the necessity of comprehensive post-COVID care strategies.

**KEYWORDS:** Post-Covid, Physical Health, Psychological Health, Covid-19.

**INTRODUCTION**

The global impact of the COVID-19 pandemic is staggering, with WHO reporting 765.9 million confirmed cases and 6.9 million deaths worldwide, as of the latest available data. In India alone, 44.97 million confirmed cases and 0.53 million deaths were reported to WHO by May 10, 2023.<sup>[1]</sup> However, amidst these concerning numbers, there is hope reflected in the administration of 13.4 billion vaccine doses globally, including 2.21 thousand million doses in India by May 1, 2023. Despite vaccination efforts, the post-COVID-19 condition remains a complex issue requiring further investigation. While some individuals recover without significant long-term effects, many continue to experience persistent symptoms.<sup>[2]</sup>

The COVID-19 pandemic has inflicted unparalleled challenges worldwide, resulting in over 635 million confirmed infections and 6.5 million deaths in the past three years. While COVID-19 primarily manifests as a respiratory illness caused by the SARS-CoV-2 virus, it has far-reaching effects, impacting various organs and systems within the body.<sup>[3]</sup> Various Studies indicate that a significant proportion of survivors experience persistent symptoms long after their initial recovery, collectively termed as long COVID or post-COVID condition. These lingering symptoms, which include fatigue, breathlessness, chest pain, cognitive impairment, and depression, underscore the need for further research to understand the full extent of the virus's long-term health implications.<sup>[4]</sup>

The pandemic has not only exacerbated existing health inequalities but also disproportionately affected vulnerable populations, including the socioeconomically disadvantaged, minorities, and essential workers. Disruptions to routine healthcare services, alongside the profound mental health impacts and economic hardships experienced by many, have added layers of complexity to the pandemic's consequences.<sup>[5]</sup> Moreover, the pandemic has highlighted the fragility of healthcare systems worldwide, with concerns arising about the capacity to manage long-term health impacts effectively, particularly in low- and middle-income countries.<sup>[6]</sup>

As efforts to combat the pandemic continue, understanding the long-term health consequences of COVID-19 remains paramount. Research into post-COVID syndrome, encompassing its pathophysiology, clinical manifestations, and management, is critical for informing evidence-based strategies to support affected individuals and guide public health policies.<sup>[7]</sup> Addressing the physical, cognitive, and psychosocial aspects of post-COVID syndrome requires a comprehensive approach, integrating healthcare services, rehabilitation programs, and mental health support to mitigate the enduring impact on individuals and societies globally.<sup>[8]</sup>

A study by Durstenfeld et al. (2024) found no association between nirmatrelvir treatment during acute infection and subsequent Long COVID symptoms beyond 90 days post-infection. Post-acute COVID-19 syndrome presents a multifaceted challenge, with patients experiencing a spectrum of system-based manifestations beyond respiratory complications.<sup>[9]</sup>

Moreover, the pandemic has had profound effects on mental health, as highlighted by Lloyd, Schubotz, Roche et al. (2023), who found detrimental impacts on the mental health of young individuals during lockdown measures. Addressing post-COVID syndrome requires tailored rehabilitation programs, pharmacological interventions, and psychosocial support, emphasizing the importance of a multidisciplinary approach.<sup>[10]</sup> Understanding the long-term implications of post-COVID syndrome is vital for informing public health policies and developing effective treatment plans to support individuals in their recovery and manage the lasting health impacts of COVID-19.

**METHODOLOGY**

**Research approach:** Quantitative research approach

**Research design:** This research employed a cross-sectional design.

**Study setting:** The study was conducted in the Outpatient Department (OPD) of MDM hospital.

**Sampling:** In this study, convenient sampling was utilized, where 190 participants were selected based on their convenient availability and accessibility at the OPD area.

**Data collection:** Data collection involves structured interviews using self-structured scales to assess physical health, and psychological well-being.

**Data analysis:** The data analysis plan encompasses descriptive statistics to summarize demographic characteristics and health outcomes, alongside correlation and association analyses to identify relationships between physical and psychological health, ensuring rigorous interpretation of findings.

**RESULT**

**Table 1: Frequency and percentages of distribution of socio-demographic variables. (N=190)**

S. N.	Variables	Frequency
<b>1</b>	<b>Age</b>	
	a) 18-25 years	40
	b) 26-35 years	41
	c) 36-45 years	32
	d) 46-55 years	48
	e) 56 years and above	29
<b>2</b>	<b>Gender</b>	
	a) Male	94
	b) Female	96
<b>3</b>	<b>Level of education</b>	
	a) No formal Education	39
	b) Middle School	34
	c) High School	48
	d) Bachelor's Degree	33
	e) Master's Degree and above	36
<b>4</b>	<b>Current employment status</b>	
	a) Employed (full-time)	40
	b) Employed ( part-time)	30
	c) Unemployed	85
	d) Student	23
	e) Retired	12

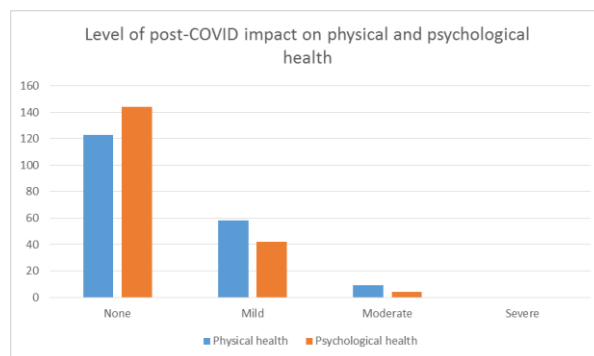
	f) Other	0
<b>5</b>	<b>Marital status</b>	
	a) Single	33
	b) Married	140
	c) Divorced	6
	d) Windowed	11
<b>6</b>	<b>Annual household income</b>	
	a) Less than 25000	44
	b) 25001-50000	103
	c) 50001-75000	31
	d) 75001-100000	12
	e) More than 100000	0
<b>7</b>	<b>Currently living</b>	
	a) Urban	46
	b) Sub-Urban	69
	c) Rural	75

The table 1 reveals that the majority of participants fell within the age range of 26 to 55 years, with the highest frequency observed in the 46-55 age group (25%). In terms of gender, the distribution was nearly equal, with slightly more females (50%). High school graduates (25%) constituted the largest educational group. Unemployment (45%) was the prevailing employment

status among participants. The majority of participants were married (73%), with single individuals forming the next largest group. In terms of annual household income (54%), the most common bracket was 25,001 to 50,000. Geographically, rural areas (39%) hosted the highest number of participants.

**Table 2: Showing level the Post-COVID Impact on physical and psychological health among those person who have recovered from COVID-19. (N = 190)**

S. N.	Level of post-COVID Impact on health	Scoring criteria	Physical health	Psychological health
			Frequency	
1	None	10-20	123	144
2	Mild	21-30	58	42
3	Moderate	31-40	9	4
4	Severe	41-50	0	0



**Figure 1: Showing level the Post-COVID Impact on physical and psychological health among those person who have recovered from COVID-19.**

The table 2 and figure 1 demonstrates that the majority of participants reported no impact on both physical (123) and psychological (144) health post-COVID-19 recovery. A smaller proportion experienced mild impact on physical (58) and psychological (42) well-being. Few

participants reported moderate impact on physical (9) and psychological (4) health, with no instances of severe impact observed. The findings suggest minimal adverse effects on physical and psychological health post-recovery.

**Table 3: Showing the relationship between physical health with psychological health among those person who have recovered from COVID-19. (N= 190)**

S. No	Variables	Mean	S.D.	“r”	Tabulated “r” value	Result
1	Physical health	18.23	4.899	0.318	0.195	Significant
2	Psychological health	19.45	6.051			

The table 3 shows mean and standard deviation for physical and psychological health variables. A positive correlation (r=0.318) suggests a significant relationship between physical and psychological health, surpassing the tabulated value (r=0.195).

**Table 4: Chi Square value showing association between the Post Covid Impact on physical and psychological health among those person who are recover from COVID-19 with their selected demographic variables. (N= 190)**

S. N.	Variables	Df	Chi-square value	
			Physical health	Psychological health
1	Age	8	13.052 <sup>S</sup>	16.188 <sup>S</sup>
2	Gender	2	2.177 <sup>NS</sup>	0.610 <sup>NS</sup>
3	Level of education	8	8.460 <sup>NS</sup>	12.728 <sup>NS</sup>
4	Current employment status	8	8.235 <sup>NS</sup>	8.670 <sup>S</sup>
5	Marital status	6	8.746 <sup>NS</sup>	2.432 <sup>NS</sup>
6	Annual household income	6	4.605 <sup>NS</sup>	7.640 <sup>NS</sup>
7	Currently living	4	10.983 <sup>S</sup>	13.308 <sup>S</sup>

S= significant, NS= Non-significant

The table 4 presents the results of the chi-square tests examining the association between demographic variables and physical and psychological health outcomes post-COVID-19 recovery. Significant associations (S) are observed between age and currently living area with both physical and psychological health. Gender, level of education, marital status, and annual household income show non-significant associations (NS) with both health dimensions. Current employment status displays a significant association with physical health but not with psychological health. These findings suggest that age and living area may be influential factors in determining post-COVID health outcomes, while other demographic variables exhibit weaker or non-significant associations.

**DISCUSSION**

The post-COVID-19 impact on physical and psychological health is multifaceted and significant, affecting individuals globally. Physically, many survivors experience persistent symptoms such as fatigue, shortness of breath, and pain, which can impair daily activities and overall health-related quality of life (HRQoL). Our study revealed the highest frequency in the 46-55 age group, while the study by Vidyarthi et al. (2023) noted the highest frequency in the 15-24 age group. Gender distribution was nearly equal in both studies, although one study had slightly more females, while the other had a majority of male cases.<sup>[11]</sup>

In our study, the majority reported no impact on physical and psychological health post-COVID-19 recovery, with only a small proportion experiencing mild to moderate impacts. Conversely, in study conducted by Envas et al. (2021), a smaller percentage of participants felt fully recovered, with a significant portion reporting new disabilities or health-related changes in occupation.<sup>[12]</sup> In our study, a significant relationship was found between physical and psychological health post-COVID-19 recovery. Conversely, in the study conducted by Kazmi et al. (2022), persistent physical symptoms such as fever, headache, cough, and breathing difficulty were

significantly associated with higher levels of psychological impact.<sup>[13]</sup>

In our study significant associations are observed between age and currently living area with both physical and psychological health among individuals recovering from COVID-19. Similarly study conducted by Shanbehzadeh et al. (2023) found that older adults experiencing Long COVID show a decline in physical health due to factors like fatigue and pain intensity, impacting their health-related quality of life.<sup>[14]</sup> A study conducted by Gu et al. (2023) found that in suburban residential areas, residents living in detached houses, especially those under 65, exhibit better health scores, possibly due to engaging in daily activities like sports and hobbies.<sup>[15]</sup> Another Study conducted by Abuhammad et al. (2023) show that recovered COVID-19 patients in Jordan, particularly females not working, with low income, married, and having multiple COVID-19 episodes, show lower health-related quality of life, emphasizing the impact of demographics on health outcomes.<sup>[16]</sup> Conversely, studies by Mahmoodi et al. (2023) shed light on factors associated with long-term psychological symptoms among individuals recovering from COVID-19, such as education level, the presence of underlying diseases, and the severity of COVID-19, highlighting the need for targeted interventions to mitigate these impacts.<sup>[17]</sup>

The study's strengths include its thorough examination of post-COVID-19 health outcomes and demographic characteristics, providing valuable insights into the sample composition and health impacts. Robust statistical analysis revealed significant associations between certain demographic variables and health outcomes, adding depth to the findings. However, limitations include potential response bias due to self-reported data and the inability to establish causal relationships with the cross-sectional design. Unexpected findings, such as the lack of significant associations for certain demographic variables, underscore the

complexity of factors influencing post-COVID-19 recovery.

In conclusion, this study aimed to evaluate the post-COVID impact on physical and psychological health in recovered individuals from selected hospitals in Jodhpur. The significance of this research lies in shedding light on the long-term health consequences of COVID-19 recovery and identifying demographic factors influencing these outcomes. Future investigations should delve deeper into these areas to broaden our understanding and facilitate targeted interventions for enhanced post-COVID care.

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