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IMPACT OF COVID-19 ON PHYSICAL ACTIVITY AND MENTAL WELL-BEING AMONG POST COVID-19 PATIENTS IN ALWAR CITY, RAJASTHAN: A CROSS-SECTIONAL STUDY

Author's Name: Mukesh Chand Meena[1]

Affiliation:

1. Faculty of Nursing (Obstetrics & Gynaecology Nursing), Govt. College of Nursing, Tijara Alwar, Rajasthan, India.

Corresponding Author Name & E-Mail: Mukesh Chand Meena, mcmeena4u@gmail.com

ABSTRACT

Background: The Coronavirus Disease 2019 (COVID-19) pandemic has emerged as one of the most significant global health crises in recent history. Beyond the acute infection, many individuals continue to experience long-term physical and psychological consequences after recovery. Reduced physical activity, fatigue, anxiety, depression, and impaired mental well-being are frequently reported among post-COVID-19 patients. Understanding these consequences is essential for planning rehabilitation services and improving quality of life. Objectives: To assess physical activity and mental well-being among post-COVID-19 patients and determine the impact of COVID-19 on these outcomes in Alwar City, Rajasthan. Methods: A quantitative descriptive cross-sectional research design was adopted. The study was conducted among 100 post-COVID-19 patients selected through non-probability convenient sampling. Data were collected using a structured demographic questionnaire, physical activity assessment tool, and Mental Well-Being Scale. Descriptive and inferential statistics were used for data analysis. Results: Findings revealed that 36% of participants had good physical activity, 40% had average physical activity, and 24% had poor physical activity. Regarding mental well-being, 38% demonstrated above-average mental well-being, 48% had average mental well-being, 10% showed below-average mental well-being, and 4% exhibited very low mental well-being. Significant associations were found between physical activity and selected demographic variables including age, gender, occupation, family income, severity of COVID-19 infection, and history of past illness. Mental well-being showed significant association with education, occupation, and family income. Conclusion: COVID-19 has a substantial impact on both physical activity and mental well-being among post-COVID-19 patients. Structured rehabilitation programs, psychological counseling, and community-based support systems are recommended to enhance recovery and improve long-term outcomes.

Keywords: COVID-19, Physical Activity, Mental Well-Being, Post-COVID Syndrome, Rehabilitation, Mental Health

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INTRODUCTION

Coronavirus Disease 2019 (COVID-19), caused by the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), rapidly spread across the globe following its emergence in Wuhan, China, in December 2019. The World Health Organization declared COVID-19 a Public Health Emergency of International Concern on January 30, 2020, and later characterized it as a pandemic. Since then, millions of individuals have been infected worldwide, resulting in significant morbidity, mortality, and socioeconomic disruption. Although considerable attention has been directed toward the acute phase of COVID-19 infection, increasing evidence suggests that many individuals continue to experience persistent symptoms even after clinical recovery. These lingering effects, often referred to as "Post-COVID Syndrome" or "Long COVID," affect multiple body systems and significantly impair quality of life. Common manifestations include fatigue, breathlessness, muscle weakness, reduced exercise tolerance, sleep disturbances, anxiety, depression, and cognitive dysfunction. Physical activity is an essential determinant of health and well-being. Regular physical activity contributes to cardiovascular fitness, muscle strength, immune function, and psychological resilience. However, COVID-19 infection often results in prolonged inactivity due to hospitalization, isolation, fatigue, and physical deconditioning. Consequently, many recovered patients experience reduced functional capacity and difficulties performing activities of daily living. Mental well-being is equally important for overall health. The pandemic has exposed individuals to unprecedented levels of psychological stress due to fear of infection, social isolation, financial uncertainty, and grief associated with illness and loss of loved ones. Post-COVID-19 patients frequently report anxiety, depression, emotional distress, and reduced psychological functioning. These mental health challenges can hinder physical recovery and contribute to long-term disability. In India, where healthcare systems faced significant challenges during successive waves of the pandemic, understanding the long-term impact of COVID-19 remains crucial. Rajasthan experienced a substantial number of COVID-19 cases, making it important to investigate the post-recovery experiences of affected individuals. Assessing physical activity and mental well-being among post-COVID-19 patients can help healthcare professionals design effective rehabilitation strategies and improve patient outcomes.

NEED FOR THE STUDY

The long-term consequences of COVID-19 represent an emerging public health concern. While much attention has focused on prevention, diagnosis, and treatment of acute infection, relatively fewer studies have examined the physical and psychological health of individuals following recovery. Persistent fatigue, reduced physical activity, anxiety, depression, and impaired well-being have been

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reported globally, highlighting the need for systematic assessment. Nurses play a pivotal role in rehabilitation and community health promotion. Understanding the extent of physical and mental health challenges faced by post-COVID-19 patients enables nurses to provide evidence-based interventions. This study was therefore undertaken to evaluate the impact of COVID-19 on physical activity and mental well-being among recovered patients in Alwar City, Rajasthan.

MATERIALS AND METHODS

A quantitative descriptive cross-sectional research design was used. The study was conducted among post-COVID-19 patients residing in Alwar City, Rajasthan. The target population consisted of adults who had recovered from laboratory-confirmed COVID-19 infection.

A total of 100 participants who met the inclusion criteria were selected using a non-probability convenient sampling technique. Inclusion criteria included individuals aged 18 years and above who had recovered from COVID-19 and were willing to participate. Patients with severe psychiatric disorders or cognitive impairment were excluded.

Data collection was performed using three instruments:

Structured Socio-Demographic Questionnaire

Physical Activity Assessment Tool

Mental Well-Being Scale

Ethical approval was obtained from the concerned authority prior to data collection. Written informed consent was obtained from all participants. Confidentiality and anonymity were maintained throughout the study.

Data were analyzed using descriptive statistics including frequency, percentage, mean, and standard deviation. Inferential statistics such as Chi-square tests were used to determine associations between study variables and socio-demographic characteristics.

RESULTS AND DISCUSSION

The findings demonstrated that COVID-19 significantly affected participants' physical activity levels. Only 36% of respondents reported good physical activity levels, whereas 40% exhibited average activity and 24% showed poor activity. These findings indicate that a substantial proportion of recovered patients continue to experience limitations in physical functioning.

The reduced physical activity observed in this study may be attributed to persistent fatigue, muscle weakness, respiratory limitations, and fear of exertion following COVID-19 infection. Similar findings have been reported in international studies documenting decreased exercise capacity and prolonged physical impairment among recovered patients.

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Regarding mental well-being, nearly half of the participants (48%) reported average mental well-being, while 14% demonstrated below-average or very low well-being. These findings highlight the psychological burden associated with COVID-19 recovery. Anxiety regarding reinfection, financial stress, social isolation, and uncertainty about future health may contribute to diminished mental well-being.

Statistical analysis revealed significant associations between physical activity and demographic factors including age, gender, occupation, family income, severity of infection, and history of chronic illness. Older adults and individuals with pre-existing health conditions appeared more vulnerable to reduced physical activity.

Mental well-being showed significant association with education level, occupation, and family income. Participants with higher educational attainment and better socioeconomic status demonstrated more favorable mental health outcomes. These findings suggest that social determinants play an important role in post-COVID recovery.

The findings support previous research indicating that COVID-19 affects both physical and psychological health long after recovery. Therefore, healthcare professionals should adopt a holistic approach to rehabilitation that addresses both physical and mental health needs.

IMPLICATIONS FOR NURSING PRACTICE

The study has significant implications for nursing education, practice, administration, and research. Community health nurses should conduct regular follow-up assessments of post-COVID patients to identify physical and psychological problems at an early stage. Nursing interventions such as exercise counseling, health education, stress management programs, and psychological support can facilitate recovery.

Nursing administrators should develop rehabilitation clinics and support groups for post-COVID patients. Nursing educators should incorporate post-COVID rehabilitation concepts into curricula to prepare future healthcare professionals for managing long-term consequences of infectious diseases.

CONCLUSION

The present study concludes that COVID-19 has a measurable impact on physical activity and mental well-being among post-COVID-19 patients in Alwar City, Rajasthan. While a proportion of participants demonstrated satisfactory recovery, many continued to experience reduced physical activity and compromised mental well-being. Significant associations between demographic characteristics and study variables further highlight the influence of social and health-related factors on recovery outcomes.

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Comprehensive rehabilitation programs focusing on physical exercise, psychological counseling, health education, and social support are essential for improving long-term recovery. Healthcare policymakers and nursing professionals should prioritize post-COVID rehabilitation services to enhance quality of life and overall well-being among recovered patients.

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