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Post-Covid 19 Consequences on The Physical, Mental, and Social Well-Being of Post-Covid Patients, Mechanism of Complications, And Strategies for Prevention

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1. Abstract

People who have recovered from covid-19 but are still reporting long-term consequences of the illness are referred to as having "long covid." This review will collect pre-existing literature and summarize the outcomes of Covid-19 on the physical, mental, and social well-being of post-covid patients, the mechanism of these complications, and potential prevention strategies. The studies have been identified through PubMed searches based on WHO definition of health and well-being. According to the research articles, in terms of Physical health, multiple organ systems showed various complications. In the mental health, many patients reported a significant decline in mental health. The Covid-19 pandemic has also altered how people connect with one another particularly in terms of social health. The pathophysiology of physical health dysfunction is said to be of multifactorial etiology, whereas in terms of mental health, the unpredictable nature of the COVID-19 pandemic, lockdown and economic collapse that followed and social health complication post-COVID-19 situation is seen because the social support typically received had been significantly disrupted. The physical, mental, and social wellbeing of patients have been disrupted by prior Covid-19, according to numerous findings that had been published. We may have more unforeseen issues as time goes on as a result of this pandemic. It is imperative to fully understand COVID-19's long-term implications on health in order to enhance each survivor's quality of life. This will make it possible to provide preventive measures for physical, mental, and social health in a responsible and timely manner.

2. Introduction

Covid-19 causes long-term consequences in some patients that may significantly affect their quality of life. The Office for National Statistics in the UK reports that about one in five individuals who test positive for COVID-19 experience symptoms for at least five weeks and more. [1] Researchers have discovered indications of a post-acute COVID-19 syndrome or ongoing COVID-19 sickness, with symptoms affecting various body systems. [26] People who have either recovered from covid-19 but are still suffering long-lasting consequences of the infection or who have had the standard symptoms for a substantially longer length of time than usual are referred to

as having "long covid." [2] The after-effects of COVID-19 impair a wide range of other bodily systems physically, physiologically, mentally and socially, in addition to the cardio-respiratory system. Post-COVID problems may develop due to a variety of processes, including COVID-19 therapy and procedure side effects, organ damage during the acute infection phase, signs of a prolonged hyperinflammatory state, an insufficient antibody response, or other unidentified variables. [26] This review aims to collect the pre-existing kinds of literature and summarize the consequences Covid-19 has on the physical, mental and social well-being of post-covid patients, the mechanism of these complications, and the potential strategies to prevent them.

3. Methodology

The studies are collected from PubMed searches. The studies were found based on WHO criteria of Health which is physical, mental, and social well-being, irrespective of the absence of disease [3] Results of the studies are described below.

4. Results

Many RCTs, Case studies and case reports are discussed in the article that confirms the aim of this review, that post-Covid-19 exposure has a massive impact on the WHO classification of Health, in numerous post-exposure patients.

5. Physical Complication

5.1. Description

The physical aspects of post-intensive care syndrome include muscle weakness, deconditioning, myopathies [muscle disease] and neuropathies [nerve injury or dysfunction] in patients with severe acute COVID-19 who are treated in intensive care units [5]. Up to 40% of COVID-19 patients were found to have myocarditis or pericarditis more than 70 days after infection, which suggests that cardiac sequelae may develop later in conjunction with a modified [delayed] innate and adaptative immune response [4]. The pulmonology function which was affected the most was lung diffusion and some studies also showed lung fibrosis in some patients [5]. Patients with COVID-19 who are hospitalized frequently experience AKI, which has a significant fatality rate. Only 30% of AKI patients had restored their renal function by the time of discharge [6].

5.2. Mechanism/ Pathogenesis of Complication

The accumulating evidence points to a multifactorial etiology, with endothelial damage, thromboembolism, inflammation, and dysfunction of the neurological system as the primary pathogenetic pathways [16]. The cytokine storm and virus induced immune response have also shown to trigger such complications [25]. Exact mechanism of pathogenesis remains unknown [16].

5.3. Prevention/Management

The treatment of many disorders involves the use of physical therapy. The major goal of this specialty's intervention in both acute and chronic illnesses is to restore and improve the quality of life [24]. ICU specialists should begin minimizing factors that lead to decreased long-term function to manage ICU patients, paying particular emphasis to preventing or treating ICU-acquired weakness, deconditioning, and myopathies and neuropathies, along with respiratory treatment [7].

6. Mental Complication

6.1. Description

The majority of SARS patients recovered physically well from their illness, but some patients and those who were caring for them a year later reported a marked decline in mental health [14]. Anxiety and depression are commonly seen in covid-19 survivors many months after covid recovery [13]. The psychological health of the most vulnerable groups is adversely affected, including children, college students, and healthcare workers who are more likely to have post-traumatic stress disorder, anxiety, melancholy, and other distressing symptoms [18].

6.2. Mechanism/ Pathogenesis of Complication

The unpredictable nature of the COVID-19 pandemic, the subsequent lockdowns, physical isolation, and other containment measures, as well as the resulting economic collapse, increased the risk of mental health problems and exacerbated health inequities [23]. Numerous factors play a role, including stigma, financial difficulties, life changes, fear of getting the disease, isolation as a result of being cut off from other people, losing a job, hearing daily news about death, and diffusion of the virus just a few minor mental effects' reasons, If we want to pinpoint the precise cause of the psychological effects of COVID, we can't simply point to one factor, even in the majority of people who work as doctors or nurses in the medical field can observe the significant alterations in the mood, such depression, and even suicide [10,11].

6.3. Prevention/Management

Given how extensive and uneven the effects of COVID-19 have been, cross-sector collaborations at the community level may be necessary to produce locally relevant solutions. Treatment that is easily accessible and focused on relationships is essential for people with complex requirements. According to recent study from general practice in an underprivileged area of Glasgow, system-level interventions like attached financial advisers and outreach mental health services are also crucial. [11]. It is crucial to determine the long-term COVID-19 pandemic impacts on mental health. Clinicians, researchers, and policymakers are expected to

be prepared for these mental health problems in terms of evaluation, therapies, and the model of care in the post-pandemic period [15].

7. Social Complication

7.1. Description of Complication

Interpersonal relationships have been impacted by the Covid-19 epidemic. With the advent of digital technology, there was a particular manner of structuring daily life during the lockdown, with people spending more time at home and less time traveling and engaging in social activities [19]. Increased social distance and broad social unrest brought on by the COVID-19 pandemic crisis have harmed interpersonal relationships and produced significant changes in lifestyle, employment, and social interactions [20]. The family, education, workplace dynamics, and specific socioeconomic groups, including women, children, small business owners, and immigrants, have all been particularly affected by the crisis [21].

7.2. Mechanism/ Pathogenesis of Complication

In the COVID-19 situation, the usual means by which people interact and receive social support have been severely interrupted. [17]. Measures used to keep COVID-19 from spreading physically have a significant impact on social norms of interaction, notably those constructed to convey trust, affinity, empathy, and respect. [eg, hugging, and physical comforting]. When epidemic waves rose and fell, it was extremely difficult for people to negotiate these standards [22].

7.3. Prevention/Management

Many COVID patients are unable to go back to work because of their lingering symptoms, and some may need ongoing state financial assistance. Some individuals could find it difficult to manage daily life, particularly if they simultaneously experience severe social isolation and/or stigmatization. Support from social services might be beneficial for these patient populations [9] Primary defence researches the pandemic's influence on an at-risk population to alleviate stress-related symptoms and delivering targeted online psychological treatment [students, medical staff, parents, and teachers] by duplicating the multimodal experience of face-to-face connection by developing new platforms for intersocial communication, as well as new tools for support and psychiatric therapy [Virtual Reality, holograms, serious games, etc.] [12]. A key way that social relationships enhance health is through social support. It speaks of the material and psychological resources that are made available through social interaction. Social support after stressful conditions has been shown to be one of the most important resilience factors [17].

8. Conclusion

Many studies have been published that show clear evidence of past Covid-19 disrupting patients' physical, mental, and social well-being. The studies reviewed were mostly 3, 6, 12 and 24 months post-covid exposure. As the years go by, we may have more unexpected complications due to this pandemic. More research should go on in this direction in a timely manner. In terms of preventive strategies, the establishment of healthcare services is critical to ensuring a thorough follow-up of patients leaving hospitals and emergency rooms after they have been discharged. The exceptional opportunity to collect data on a consistent basis through patient follow-up will also allow researchers to better define the global impact of COVID-19, pinpoint clinical requirements, and plan comprehensively tailored treatment regimens. A thorough understanding of COVID-19's long-term health consequences is critical to improving each survivor's quality of life. This will allow for the development of timely rehabilitation and physical, mental, and social health deterioration preventive measures.

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10. Conflict of Interest Statement

There is no conflict of interest.

11. Consent to Participate

All authors designed the study, wrote the manuscript, and revised it.

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