

# Effect of Anxiety and Fear on Neurorehabilitation Services in COVID-19

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The face of neurorehabilitation has progressively changed in recent years. Traditional neurorehabilitation procedures may have limited efficacy in most patients with common neurological diseases, such as stroke, Parkinson's disease, spinal cord injury, severe brain injury, spasticity, and cognitive disorders. New technologies have been reported to enhance the effectiveness of rehabilitation strategies in these conditions. They include robotic-assisted training, virtual reality, functional electrostimulation, non-invasive brain stimulation (NIBS) to enhance the intensity and quality of neurorehabilitation, and to manipulate brain excitability and plasticity, as well as innovative approaches such as assistive technology and domotics. The exploration of the effects of neurorehabilitation technologies and NIBS on plasticity through the use of advanced technologies (i.e., functional MRI, near infrared spectroscopy, high-density EEG, etc.) may represent a surrogate outcome measure in the near future. On the other hand, translational and back-translational models are important to offer robust neurobiological grounds to current rehabilitative approaches to neurological disorders.

In December 2019, the novel coronavirus (SARS-CoV-2) began its global spread that has (so far) involved 196 nations and affected around 44 million people, with a mortality rate of around 3%–4% [1]. The quick spread of Covid illness 2019 (COVID-19) and narrow mindedness of vulnerability make people vulnerable to fear and anxiety. Employees at rehabilitation centers inevitably have close contact with many vulnerable groups, so rehabilitation centers must make every effort to prevent the spread of disease during an epidemic. Individuals with neurological and musculoskeletal disabilities are helpless against the suspension of normal restoration benefits because of rules prohibiting close contact to forestall the spread of COVID-19. Nonetheless, such patients and their parental figures depend on help from rehabilitation services during both intense and ongoing stages. Without such administrations, these patients may encounter a critical loss of capacity, prompting a powerlessness to oversee day by day exercises. Loss of capacity and expanded requirement for care will affect recovery benefits and cause huge monetary expenses to help such patients during and after the pandemic. The current COVID-19 pandemic has likewise expanded the dread and tension of medical services suppliers; these feelings of trepidation may incorporate worries about contacting conceivably contaminated surfaces and about experiencing individuals with any manifestations of disease, including hacking, wheezing, or fever.

There is no settled treatment or vaccine for COVID-19, which makes the pandemic considerably terrifying. Individuals' feelings of trepidation are likewise filled by an absence of data about COVID-19 and consistent combustible media inclusion that plays to a feeling of threat. Fear and anxiety are adaptive defensive responses that have evolved to protect us from dangerous stimuli [2]. However, when fear is extremely intense or we face an overwhelming threat, defensive neural circuitry is activated. This circuitry includes the medial prefrontal cortex, the dorsal periaqueductal gray, and the amygdala and can increase sympathetic or neuroendocrine (hypothalamus-pituitary-adrenal axis) outflow [3]. This activation can cause a decrease in CD4+ T-cells relative to CD8+ cells, which is an indicator of a weakened immune response [4]; it can also cause stress-mediated immune activation via an increase in plasma corticosterone [5].

Activity in these subcortical structures promotes a set of behavioral, neuroendocrine, and neuro-immunological responses aimed at controlling inflammatory responses, resisting pathogens, and even suppressing tumorigenesis. The pandemic of COVID-19 has a significant impact on social aspects, healthcare, and economic. This pandemic continues to influence and modulate fear and anxiety in healthcare. It's noteworthy that fear-related issue, is not unique to the COVID-19 pandemic situation, given the fact that practical responses of the society, to any disaster situation, is emotional and a survival instinct. Acute rehabilitation services in hospital settings are still functioning; the current issue is related to outpatient and community-based rehabilitation services. Many services have started telemedicine and virtual sessions, but these methods do not provide sufficient care for people with disabilities, who can lose function without regular maintenance rehabilitation. This problem is of lesser concern in Eastern cultures, where family support is more common than in the West. Thus, rehabilitation services face a challenging situation: Healthcare systems were not prepared for a pandemic, and they were even less prepared for its impact on rehabilitation services.

In the current situation, to reduce pressure and for the continuation of administrations during the COVID-19 episode, it is fundamental for share current realities, comprehend the genuine dangers, build up global joint effort to create proof based, practical conventions to battle present and future pandemics of this greatness. Restoration administrations should proceed without gambling contamination. Instructions to achieve this is both a general wellbeing challenge and a moral situation.

## References

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