## Biopsychosocial Factors Faced by the COVID-conscious Community

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## I. Introduction:

One of the most confounding impacts of COVID-19 is in regards to psychosocial factors. Right now, in 2024, the COVID-conscious community has less access to medical facilities that adhere to covid-conscious practices, such as consistent respirator mask-wearing, increased ventilation and filtration, and proper testing and isolating protocols, than ever before. As a result, our community often has an immensely difficult and stressful time getting treatment for new or existing mental health conditions. Further difficulties come from shortages and long wait times. Common factors of gas-lighting and pathologizing COVID-conscious behaviors by others is another factor that may reduce treatment-seeking.

Furthermore, COVID-19 infections themselves are known to cause new or worsening impacts on the brain, cognition, behaviors, emotions, psychiatric disorders and brain diseases. The combination of increasing mental health risks and few accessible treatment options is a recipe for disaster.

Infections pose a mental health risk to everyone, even those in the COVID-conscious community who use precautions. Risk for infection is higher than ever right now due to more contagious variants, more people going into public while contagious (due to CDCs change in isolation policy), fewer people masking, and lack of appropriate ventilation and filtration. Although one-way masking with a respirator such as N95 is better than not masking, they are often not enough to prevent infection in situations such as the above, when viral density is higher, and exposure longer. Many places are forcing return to office, and governments have ended most covid-related assistance programs. In the meantime long COVID infections and subsequent long COVID are still occurring, causing difficulties and stress at work and even resulting in long-term disability. Without safe medical access, this may put an extreme difficulty on those in the covid-conscious community who are aware of the real dangers of infection and reinfection to both themselves and others, who are trying to navigate risks to get care, and who feel pressure socially, all of which can lead to dire situations if not counterbalanced.

Along with accessibility issues and infection-related issues, our covid-conscious community also faces discrimination issues, such as social stigma for mask-wearing when interacting in work, school, and in other community spaces. Increased stress from cognitive dissonance involved in spaces and people that should be safe but are not using safe practices, can lead to social anxiety, can cause new or worsened health anxiety, and cause justified infection fears due to the very real short- and long-term health risks and resulting career problems associated with COVID and long Covid. The people who are following the science-based research to prevent COVID-19 infection and reduce transmission in their households, social circles, and in their communities are often given little support and few tools to cope with this extreme stress.

In acknowledging these sensitive concerns, there is a dire need to gather resources to assist those in our covid-conscious communities in finding help from therapists and mental health facilities that both use precautions in their practice and their lives, and have an understanding of the unique psychological issues that we face. The next section of this resource is Care Resources, and includes tools, therapist directories, crisis center numbers, and information on reasonable accommodations.

The third section of this resource includes articles and studies on COVID-infection-caused biopsychosocial problems. It is important to have access to the latest research on how COVID-19 infection itself affects the brain, cognitive processes, emotions and behaviors. By being aware of the risks of mental health issues faced after infections, one can prepare to seek therapies, treatments, and supportive services for individuals and families for problems ranging from mild to crisis in a way that protects physical safety and respects covid-conscious lifestyle choices.

#### The Goals of this resource are:

1- Emphasizing that using Covid precautions to maintain physical safety is not a mental health problem.

2- Validating the stress that comes with living in a society that does not follow precautions to reduce COVID-19 transmission, that sometimes discriminates against those who are.

3- Assisting covid-conscious people in finding support, coping mechanisms, and safe access to mental health care resources to deal with the increased stress and grief brought on by the above challenges.

4- Providing articles and research on COVID Infection-caused psychological impacts

## II. Accessibility and Care Resources

#### Being Ready with N95 Masks for Different Situations:

It is highly recommended to have **strapless**, **metal-free**, **NIOSH-approved N95s such as** <u>**Readimasks**</u> on hand in case of emergency situations. Readi Masks are hospital-safe, <u>mri-safe</u>, and safe for use in psychiatric institutions which sometimes ban masks with metal nose pieces. Having these masks on hand in advance of emergencies is recommended.

#### **Display/ Signage:**

<u>Airborne Precautions Printable Sign</u> It also is helpful to display signage on door of room if in a facility

#### **Printouts for Medical Staff:**

The following print-outs are helpful for providing explanation of precautions:

Why I Take COVID Precautions

COVID Safety Isn't An Anxiety Disorder

Why your Patient is COVID-Cautious

**COVID for Therapists** 

#### Therapists, Crisis Helplines, and Mobile Services:

#### **Covid-conscious Therapist Directory**

<u>COVID Meetups</u>: A free service to find individuals, families and local businesses/services who take COVID precautions in your area

Telehealth Guidance, Actions by State

#### Contact information for Covid Conscious telehealth therapists (not a comprehensive list):

- <u>https://lancasterpsychology.com/location-and-contact/</u> (PA)
- <u>https://www.veredcounseling.com/</u> (TX and NC)
- <u>https://www.2stories.com/</u> (MN)
- <u>https://www.inclusivetherapists.com/minnesota/rochester/nicole-thomte</u> (MN)
- <u>https://www.ardentcc.org/</u> (TN)

- <u>https://directory.choosingtherapy.com/therapist/michelle-foster/</u> (NY)
- <u>https://www.capazcounseling.com/</u> (NY)
- <u>https://bio.site/atherapistcs/</u> (CA)
- <u>https://joyfulempath.com/</u> (CA, OR)
- <u>https://www.brightspottherapyandwellness.com/</u> (DC, MD, VA)

#### **Crisis Numbers:**

- National Alliance on Mental Illness (NAMI) Helpline: (US-based)
  - Connect by phone 800-950-6264 or text "Helpline"
    - to 62640, or chat. In a crisis call or text 988.\*
- Crisis Lines By Country
- Psychology Today Crisis Hotlines
- <u>American Psychological Association Crisis Numbers</u>

#### **Crisis Resolution Home Treatment:**

- Crisis Resolution Home Treatment (CRHT) can provide a home-based treatment as substitution for hospital-based treatment: You may ask for <u>reasonable</u> <u>accommodations</u> such as respirator mask-wearing amongst staff– see following section on Reasonable Accommodations).
- **Mobile/Home Health Units**: (this is not a full list, search in your area for mobile mental health and CRHT), these are a few examples:
  - California Mobile Crisis Treatment: <u>https://www.dhcs.ca.gov/Pages/CalAIM-Mobile-Crisis-Services-Initiative.aspx</u>
  - Eugene and Springfield Oregon: <u>CAHOOTS White Bird Clinic</u>
  - UK: <u>https://www.tewv.nhs.uk/services/crisis-resolution-intensive-home-treatment/</u>

#### • Studies on CHRT and Mobile Crisis Units:

- <u>https://link.springer.com/article/10.1007/s10597-020-00618-3</u> "The findings suggest that patients with acute mental disorders who have a certain level of functioning and social support might benefit most from HT (home treatment) in the sense of successful replacement of hospital care."
- <u>https://bmcpsychiatry.biomedcentral.com/articles/10.1186/s12888-022-04020-z</u> *CRHT was comparable to standard hospitalization in terms of psychiatric symptoms reduction, readmission rates and length of readmissions, but it was also characterized by a longer first treatment period. However, observational evidence following the study indicated that CRHT duration constantly lowered over time since its introduction in 2016 and became comparable to hospitalization, showing therefore to be an effective alternative also in terms of treatment length.*
- <u>Hospital COVID Precaution Ranking List</u>: Hospitals are places where a person can go to receive treatment for crises. Use this ranking list to see if there is a hospital near you that has put in COVID precautions. Call for up-to-date verification. If there is not a hospital near you listed, use reasonable accommodations requests.
- Reasonable Accommodation Requests: Anyone can make <u>reasonable</u> accommodation requests for things like providers wearing respirator masks; here is more info on how to make accommodation requests related to COVID precautions and what to do if you are denied.

## III. Biopsychosocial Research:

Research on COVID-19 infection affects on brain chemistry, psychology, and mental health show COVID-19 infection has serious biological implications on a significant portion of those infected, and can manifest in a range of cognitive, behavioral, emotional, psychiatric, social, and neurodegenerative diseases.

The symptoms/diseases associated with COVID-19 can be short-term or long-term and can be severe and debilitating. Long COVID occurs in approximately a third of COVID survivors and is now the <u>third leading neurologic disorder</u> in the United States.

Knowing that there could be a cause of new or worsening mental health symptoms can be helpful in alleviating some of the anxiety that goes with them and aid in finding treatments.

The following are articles and studies of how COVID-19 infection affects the brain, cognition, emotions, behavior, psychiatric disease, and dementias

### Articles:

<u>The Conversation: Mounting Research Shows COVID-19 Leaves its Mark on the Brain</u> (February 28th, 2024)

Long Covid and Impaired Cognition — More Evidence and More Work to Do Ziyad Al-Aly, M.D., and Clifford J. Rosen, M.D. February 29, 2024

<u>Psychology Today: Update on COVID-19 and How It Changes the Brain</u> <u>COVID-19 is a systemic illness that often involves the central nervous system.</u> <u>Updated January 27, 2024</u>

About one-third of COVID-19 survivors suffer from a variety of symptoms long after they were first infected. COVID-19 can affect the brain, even in asymptomatic patients. Brain fog is the most frequently reported symptom in survivors. Reportedly, neurological symptoms affect more than 30 percent of COVID-19 patients. Frequently, there is neurological involvement in all stages of this illness, such as acute, subacute, chronic, and post-acute sequelae.

<u>COVID Effects on the Brain: A Summary and Resource</u> (WHN Science Communications, January 2023)

Researchers discover that COVID-19 can cause brain cells to fuse (June 2023 article)

### **Brain Effects:**

#### **Omicron Variant Triggers High Incidence of Cerebrovascular Lesions in Children**

#### 2024 Nature Study

Blood–brain barrier disruption and sustained systemic inflammation in individuals with long COVID-associated cognitive impairment.

#### SARS-CoV-2 infection causes dopaminergic neuron senescence (2024)

hPSC-derived DA neurons are susceptible to SARS-CoV-2 infection. SARS-CoV-2 infection of DA neurons triggers cellular senescence (brain cell death) response. Several FDA-approved drugs were identified to rescue senescence of DA neurons. Cellular senescence was found in substantia nigra tissues of COVID-19 patients.

Long-term Effects of SARS-CoV-2 Infection on Human Brain and Memory (2023) Studies showed that SARS-CoV-2 infection can cause more than 10% patients with the Long-COVID syndrome, including pathological changes in brains. This review mainly provides the molecular foundations for understanding the mechanism of SARS-CoV-2 invading human brain and the molecular basis of SARS-CoV-2 infection interfering with human brain and memory, which are associated with the immune dysfunction, syncytia-induced cell death, the persistence of SARS-CoV-2 infection, microclots and biopsychosocial aspects.

Long-COVID cognitive impairments and reproductive hormone deficits in men may stem from GnRH neuronal death. eBioMedicine (2023):

Putative GnRH neuron and tanycyte dysfunction following SARS-CoV-2 neuroinvasion could be responsible for serious reproductive, metabolic, and mental health consequences in long-COVID and lead to an increased risk of neurodevelopmental and neurodegenerative pathologies over time in all age groups.

## SARS-CoV-2 infection and viral fusogens cause neuronal and glial fusion that compromises neuronal activity (2023 study)

We show that SARS-CoV-2 infection induces fusion between neurons and between neurons and glia in mouse and human brain organoids. We reveal that this is caused by the viral fusogen, as it is fully mimicked by the expression of the SARS-CoV-2 spike (S) protein or the unrelated fusogen p15 from the baboon orthoreovirus. We demonstrate that neuronal fusion is a progressive event, leads to the formation of multicellular syncytia, and causes the spread of large molecules and organelles. Last, using Ca<sup>2+</sup> imaging, we show that fusion severely compromises neuronal activity. These results provide mechanistic insights into how SARS-CoV-2 and other viruses affect the nervous system, alter its function, and cause neuropathology.

Neurovascular injury with complement activation and inflammation in COVID-19

Injury to the microvasculature by immune complexes with complement activation is the key central event that results in breakdown of the blood–brain barrier, microthromboses, perivascular inflammation and neuronal injury. We postulate that these events are central to the development of the neurological manifestations seen in acute COVID-19 and possibly in long-COVID.

Severe acute respiratory syndrome coronavirus 2 infection leads to Tau pathological signature in neurons

Detection of SARS-CoV-2 viral proteins and genomic sequences in human brainstem nuclei

SARS-CoV-2 Spike protein alters microglial purinergic signaling (Frontiers, 2023)

Selective visuoconstructional impairment following mild COVID-19 with inflammatory and neuroimaging correlation findings (2023)

Neurological toll of COVID-19 (2022)

SARS-CoV-2 productively infects human brain microvascular endothelial cells (2022)

Brain imaging and neuropsychological assessment of individuals recovered from a mild to moderate SARS-CoV-2 infection - PubMed (2023)

SARS-CoV-2 is associated with changes in brain structure in UK Biobank | Nature (2022)

18F-FDG brain PET hypometabolism in patients with long COVID (2021)

#### Long-term neurologic outcomes of COVID-19 (2022)

In conclusion, our report provides a comprehensive analysis of neurologic outcomes at 12 months. We show increased risk of an array of neurologic disorders spanning several neurologic disease categories including stroke (both ischemic and hemorrhagic), cognition and memory disorders, peripheral nervous system disorders, episodic disorders, extrapyramidal and movement disorders, mental health disorders, musculoskeletal disorders, sensory disorders, and other disorders including Guillain–Barré syndrome, and encephalitis or encephalopathy. The risks were evident in all examined subgroups and were evident even in people who were not hospitalized during the acute phase of the disease. Altogether, the findings call for attention to the long-term neurologic consequences of SARS-CoV-2 infection. Both healthcare system planning, and more broadly, public policy making, should take into account the long-term neurologic (and other) consequences of infection with SARS-CoV-2.

## **Cognitive Effects**

#### **<u>Cognition and Memory</u>** After COVID-19 in Large Community Sample (Feb 2024)

Our assessment comprised tasks that were designed to measure distinct aspects of cognitive performance that are associated with different brain systems. The memory, reasoning, and executive function (i.e., planning) tasks were among the most sensitive to Covid-19–related cognitive differences. Poorer memory performance was characterized by equivalent **reduced accuracy in immediate and delayed recognition** rather than by accelerated forgetting — an observation that points to mechanisms of the medial temporal lobe, such as hippocampal neurogenesis, and functional interactions with frontoparietal attentional systems. Increased inflammation in the medial temporal lobe, accelerated atrophy of functionally associated regions of the brain and disturbed functional dynamics have been reported after Covid-19. Our results confirmed associations of **cognitive deficits with mood swings and fatigue** but also with a variety of other symptoms. Therefore, it is likely that multiple underlying factors contribute to cognitive deficits after Covid-19.

## Insights into **attention and memory difficulties** in post-COVID syndrome using standardized neuropsychological tests and experimental cognitive tasks (2024, Nature)

Our findings revealed **significant attention deficits in post-COVID patients** across both neuropsychological measurements and experimental cognitive tasks, evidencing reduced performance in tasks involving interference resolution and selective and sustained attention. Mild executive function and naming impairments also emerged from the neuropsychological assessment. Notably, **61%** of patients reported significant prospective **memory failures in daily life**, aligning with our recruitment focus. Furthermore, our patient group showed significant **alterations in the psycho-affective domain, indicating a complex interplay between cognitive and psychological factors**, which could point to a non-cognitive determinant of subjectively experienced cognitive changes following COVID-19. In summary, our study offers valuable insights into attention challenges faced by individuals recovering from COVID-19, **stressing the importance of comprehensive cognitive and psycho-affective evaluations for supporting post-COVID individuals**.

<u>Attentional Impairment and Altered Brain Activity in Healthcare Workers After Mild COVID 19</u> SARS-COV-2 infection may have led to reduced brain activity in the left superior and left middle frontal gyri, thus impairing attentional orienting and executive control networks, which may explain the development of attentional deficits after COVID-19.

Long COVID is associated with severe cognitive slowing: a multicentre cross-sectional study (2024)

Long COVID Sufferers with Cognitive Complaints and Mental Health Issues Have Changes in Brain Function, New Study Suggests

<u>Neuroinflammation After COVID-19 With Persistent Depressive and Cognitive Symptoms</u> (2023)

Long COVID-19: Objectifying most self-reported neurological symptoms (2022)

Assessment of Cognitive Function in Patients After COVID-19 Infection

In this study, we found a relatively high frequency of cognitive impairment several months after patients contracted COVID-19. Impairments in executive functioning, processing speed, category fluency, memory encoding, and recall were predominant among hospitalized patients. The relative sparing of memory recognition in the context of impaired encoding and recall suggests an executive pattern. This pattern is consistent with early reports describing a dysexecutive syndrome after COVID-19 and has considerable implications for occupational, psychological, and functional outcomes. It is well known that certain populations (eg, older adults) may be particularly susceptible to cognitive impairment after critical illness5; however, in the relatively young cohort in the present study, a substantial proportion exhibited cognitive dysfunction several months after recovering from COVID-19.

<u>Neurocognitive and psychiatric symptoms following infection with COVID-19</u>: Evidence from laboratory and population studies (2023)

- Study 1 findings revealed a significant association between symptomatic COVID-19 and several indices of cognitive dysfunction among fully vaccinated adults. These included increased Flanker interference and reduced oxygenated hemoglobin within the right superior frontal gyrus, an effect that appeared to be more prominent in women than men, and manifested more in high demand cognitive processing (i.e., incongruent Flanker trials) more so than low demand processing.
- The superior frontal gyrus has been shown to be responsive to Flanker task performance previously and is impacted by neurobehavioral conditions like attention deficit disorder (Melara et al., 2018; Suzuki et al., 2017, 2018; Kawai et al., 2012). Our results further support the idea that COVID-19 infection impacted higher executive functioning at a neurobehavioral level.
- Positive symptomatic COVID-19 history was also associated with amplified delay discounting. These findings are meaningful to the extent that DD task performance is linked to the orbitofrontal cortex, a hypothesized primary site for SARS-CoV-2 neuroinvasion and/or localized neuroinflammation.
- Study 2: Using latent variable modelling to assess psychiatric symptomology and cognitive dysfunction, we observed that cognitive dysfunction was a significant mediator of the relationship between COVID-19 and psychiatric symptoms.
- Symptoms of anxiety were relatively common, with 28% of respondents meeting the GAD-7 clinical cutoff threshold at baseline, and 17% meeting the threshold at follow-up. Similarly, 41% met the CESD-10 clinical cutoff threshold at baseline. Symptoms of executive dysfunction (Mean = 6.35, SD = 2.41), agitation (Mean = 4.83, SD = 2.15), and attentional lapses (Mean = 4.69, SD = 2.05) were moderate.

## **Behavioral Effects**

# Exposure to COVID-19 and aggression: the mediating role of anxiety and the moderating role of rumination

Exposure to COVID-19 may cause negative emotions like anxiety, which is one of recognized risk factors for aggressive behaviors. This study looked into the effect of exposure to COVID-19 on aggression and how anxiety may act as a mediating factor, as well as lastly how rumination could moderate a variety of indirect paths during the epidemic of COVID-19. According to the current study's findings, which included a sizable sample of Chinese college students (N = 1,518), being exposed to COVID-19 showed a positive connection with aggression and anxiety, as well as rumination. These findings clarify the role that mediators play in the relationship between anxiety and exposure to COVID-19. The results are also helpful for personalizing treatments and putting preventative measures in place to decrease the aggression brought on by exposure to COVID-19. It is explored how lowering rumination and anxiety may be useful in the context of COVID-19 to lessen the psychopathological effects of the condition.

## Differential personality change earlier and later in the coronavirus pandemic in a longitudinal sample of adults in the United States

When personality was measured in 2021–2022, however, there was no significant change in neuroticism compared to pre-pandemic levels, but there were significant small declines in extraversion, openness, agreeableness, and conscientiousness. The changes were about one-tenth of a standard deviation, which is equivalent to about one decade of normative personality change.

#### Suicidal Ideation and/or Behaviors

<u>Hyper/neuroinflammation in COVID-19 and suicide etiopathogenesis: Hypothesis for a nefarious</u> <u>collision? May 2022</u>

Hyperinflammation is a hallmark of COVID-19 disease. Neuroinflammation is also involved in suicide pathogenesis. It is possible that the two inflammation cascades share colliding points. Hyper/neuroinflammation could be synergic in chronic neuropsychiatric sequelae, including suicide. This is relevant to COVID-19 survivors as long-term impact of the disease is unknown.

#### **Risk-taking behaviors**

<u>Risk-Taking Behavior in Recovered COVID-19 Patients</u> (2021) Recovered patients showed higher risk-taking behavior tendencies.

<u>Coping efficacy is associated with the domain specificity in risk-taking behaviors during the</u> <u>COVID-19 pandemic (2022)</u> PANDAS/PANS in the COVID-19 Age: Autoimmunity and Epstein–Barr Virus Reactivation as Trigger Agents? (2023)

*Immune-related brain inflammation in children related to COVID-19 infections can manifest as* **new or worsened\_anxiety, OCD, ticks, phobias, aggression, worsening in fine motor skills, math, or writing** and is often termed Pediatric Acute-Onset Neuropsychiatric Syndrome (PANS).

> - Article: Are we facing a surge of Long Covid with Paediatric Acute-Onset Neuropsychiatric Syndrome (PANS)?

## **Psychiatric Effects**

<u>Nature Behavior study March 2024</u> Long-term risk of psychiatric disorder and psychotropic prescription after SARS-CoV-2 infection among UK general population

#### COVID Survivors Face Increased Psychiatric Risks

## Neurological and psychiatric risk trajectories after SARS-CoV-2 infection: an analysis of 2-year retrospective cohort studies including 1 284 437 patients (2022)

Risks of cognitive deficit (known as brain fog), dementia, psychotic disorders, and epilepsy or seizures were still increased at the end of the 2-year follow-up period; whereas Risks of the common psychiatric disorders returned to baseline after 1–2 months (mood disorders at 43 days, anxiety disorders at 58 days) and subsequently reached an equal overall incidence to the matched comparison group (mood disorders at 457 days, anxiety disorders at 417 days).

#### COVID-19 and Psychotic Symptoms: the View from Psychiatric Immunology (2021)

To explore the immunological underpinnings of **psychosis** in the COVID-19 patients. *Recent Findings* 

COVID-19 pandemic led to a surge in psychiatric morbidities, including psychosis. Various putative biological and psychosocial changes have been implicated in COVID-19-related psychosis. COVID-19 is a proinflammatory state. Alterations in immunological processes both as a direct consequence of infection or secondary to the hyperimmune response heuristically explain the etiopathogenesis of psychosis in the affected individual. The uses of immunosuppressant and immunomodulatory drugs may be the other moderators of a psychotic presentation in COVID-19 patients. Evidence to substantiate this hypothesis is still lacking however, which further studies should address. Because of its management implications, a better understanding of the involved immunological mechanisms becomes extremely important.

#### Summary

Evidence suggests a putative role of immunological alterations in the pathogenesis of COVID-19-related psychosis. The immunological abnormalities are primarily attributed to the pathophysiology of COVID-19 infection, medications used, and stress.

6-month neurological and psychiatric outcomes in 236 379 survivors of COVID-19: a retrospective cohort study using electronic health records

The present data show that COVID-19 is followed by significant rates of neurological and psychiatric diagnoses over the subsequent 6 months. Services need to be configured, and resourced, to deal with this anticipated need.

## **Accelerates Dementias**

NEWS RELEASE 4-APR-2023 New study shows SARS-CoV-2 infection accelerates the progression of dementia

Alzheimer's disease risk after COVID-19: a view from the perspective of the infectious hypothesis of neurodegeneration (2023)

The Effects of SARS-CoV-2 Infection on the Cognitive Functioning of Patients with

Pre-Existing Dementia. (2023).

## Non-Infection-Related Pandemic Effects/ Sociology

The COVID-19 Pandemic has caused effects on both previously healthy as well as those with previous mental health conditions. Ability to maintain healthy lifestyle behaviors, including using COVID-19 precautions such as mask wearing, physical distancing, using remote work, and isolating when infectious, can be affected by anxiety, coping mechanisms, and social/community support. These studies will look at the effects of the pandemic.

#### Health Anxiety, Health Perception, Healthy Lifestyle Behavior Among Psychiatric Patients During the COVID-19 Pandemic

- In this study, it was determined that the Health Anxiety Scale scores of the healthy group were <u>higher</u> compared to individuals with psychiatric disorders; **32% of the healthy group experienced health anxiety.** The researchers speculated that the lower amount of anxiety measured in the psychiatric group could be because: "Individuals with psychiatric disease previously faced illnesses, hospital visits, and treatment protocols several times and experienced anxiety associated with a potential disorder. This experience could have facilitated their coping mechanisms with the pandemic, as they are more familiar with health anxiety, and thus reduced the distress induced by a new disease."
- The researchers assert that: "Acceptable anxiety <u>should</u> lead to increased protective behavior in the individual (such as using masks, social distancing, paying attention to hygiene, etc). It was expected that those with high anxiety would take precautions to prevent infection and adhere to hygiene and social distancing recommendations. However, the present study demonstrated that the increase in the level of anxiety <u>reduced</u> its protective and motivating properties (that is, it reduced health behaviors such as masking, social distancing, ventilating, paying attention to hygiene behaviors) and could disrupt individual functions." In other words, those who experienced the most health anxiety were those without previous psychiatric history, and they ended up using the least amount of COVID precautions. The researchers state: "It could be predicted that individuals with no prior psychiatric disorder could need psychiatric assistance after the COVID-19 pandemic."