The mental health impact of COVID-19

Werner van der Westhuizen
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Introduction

From when COVID-19 was initially identified in Wuhan, China in December 2019, it spread to the rest of the world in a matter of months. No-one was prepared for what was about to happen – the large-scale impact that would affect everyone either directly or indirectly. Once the scientific and medical community and the rest of the world began to understand the impact of the illness on people's health, the social and psychological impact followed. Our understanding of both the physical and mental health aspects of COVID-19 remain limited and ongoing research is required. This is a brief summary highlighting some of what has become known and understood about the mental health impact of COVID-19, but it is by no means comprehensive or conclusive.

What is COVID-19?

Coronavirus Disease (COVID-19) is the disease caused by the new coronavirus that emerged in China in December 2019 (Sauer, 2020). The virus is spread from person to person through droplets released into the air when an infected person coughs or sneezes. The droplets generally travel a few feet before they drop to the ground or onto a surface.

Symptoms show up in the person infected with the virus within 14 days of exposure and include the following:

- Cough
- Fever or chills
- Shortness of breath or difficulty breathing
- Muscle or body aches
- Sore throat
- New loss of taste or smell
- Diarrhea
- Headache
- New fatigue
- Nausea or vomiting
- Congestion or runny nose

In a small percentage of cases, COVID-19 can also lead to severe respiratory problems, kidney failure or death.

COVID-19 is confirmed with a laboratory test, although various test kits are being developed for self-testing and becoming widely available.

Currently there is no specific treatment for COVID-19 and sick people are treated with supportive measures to relieve symptoms. In severe cases hospitalisation is required and treatment with drugs and other therapeutics is administered.

The virus that causes COVID-19 is similar to the virus that caused the SARS (severe acute respiratory syndrome) outbreak in 2003, as both are coronaviruses. However, COVID-19 seems to spread faster, but cause less severe symptoms.

In order to prevent the spread of COVID-19, people should:

- Wear masks
- Practice physical distancing (also called social distancing)
- Wash their hands often

In addition, when someone is sick measures should be taken to clean and disinfect the home and gloves should be used in certain situations.

Some people are at increased risk for severe infections and should take extra precautions. They include:

- Older adults (risk increases with age, especially after the age of 50)
- People with certain medical conditions, such as cancer, kidney disease, heart conditions, compromised immunity, obesity, pregnancy, sickle cell disease, smoking and type 2 diabetes mellitus

A pandemic

The spread of COVID-19 reached pandemic proportions and most countries have taken severe steps to attempt to stop the spread of the disease. On 6 November 2020, the World Health Organisation reported the following worldwide statistics:

- 48,535,508 confirmed cases
- 1,231,017 deaths
- 219 countries, areas or territories with cases

Physical illness and impact

COVID-19 can impact the mental health of people indirectly due to the stresses caused by the pandemic, as well as through the direct viral effects on those affected (Campbell, 2020). The illness can cause neuropsychiatric symptoms, including brain inflammation, immunological damage to nerve cells and direct infection of the brain (Troyer, Kohn & Hong, 2020). It may affect stress and mood via key regulatory systems such as the HPA Axis and create cardiovascular, blood pressure and clotting issues (Brenner, 2020).

Physical complications as a result of contracting COVID-19 may also include (Brenner, 2020):

- Strokes, or tiny strokes due to low blood flow, agitation, abnormal reflexes and other neurological issues
- Inflammation of the brain
- Delirium
- Difficulty with physical coordination
- Difficulty with paying attention
- Disorientation
- Personality change (anecdotal evidence)
- Post-viral traumatic brain injury

Many people who have contracted COVID-19 experience ongoing long-term effects (Maxwell, 2020). Apart from the significant social and psychological impact, symptoms often arise in one physiological system and then abate, only for symptoms to arise in a different system. These symptoms may include difficulty breathing and problems with the brain, heart and cardiovascular system to the kidneys, gut, liver and skin. These could be a result of permanent organ damage to the heart or lungs, post-intensive-care syndrome, post-viral fatigue syndrome or continuing COVID-19 symptoms. This multisystem ongoing nature of COVID-19 means that it needs to be considered holistically.

Mental health impact

Psychiatric symptoms in the post-infection stage of patients with SARS and MERS (Rogers et al., 2020) can inform with regards what to expect with COVID-19:

- Depressed mood
- Insomnia
- Anxiety
- Irritability
- Memory problems
- Fatigue
- Post-illness PTSD (32.2%)
- Depression (14.9%)
- Anxiety disorders (14.8%)

In a study by Mazza et al. (2020) COVID-19 survivors present with a higher prevalence of psychiatric consequences, with 55% presenting a pathological score for at least one psychiatric disorder. This includes a higher than average incidence for PTSD, major depression and anxiety. Hunt (2020) reports that in the three months following testing positive for COVID-19, almost one in five survivors were found to get a psychiatric diagnosis. Considering this alarming impact of COVID-19 infection on mental health, Mazza et al. recommends that COVID-19 survivors are assessed for psychopathology so that emergent psychiatric conditions can be diagnosed, treated and support provided.

The mental health consequences of COVID-19 affect both the general population and vulnerable groups (Vindegaard & Benros, 2020). While there is a decrease of psychological well-being in the general population, patients with pre-existing psychiatric conditions reports a worsening of psychiatric symptoms. Patients with COVID-19 also display high levels of PTSD and increased levels of depression.

Healthcare workers also showed increased problems with depression and anxiety as well as decreased sleep quality (Vindegaard, & Benros, 2020). Healthcare workers however reported lower levels of vicarious trauma than others while any increases in suicidal thinking is still unknown.

Risk factors for developing psychiatric symptoms include (Vindegaard & Benros, 2020):

- Sociodemographic factors such as
    - Living alone
    - Higher and lower educational levels
    - Being a student
    - Not having children or have a higher number of children
    - Living in an urban area or a rural area
- Current or past medical history, including
    - Current illness
    - Psychiatric history
    - Substance abuse use disorder
    - Past medical history
- Psychological and social factors such as
    - Low self-rated well-being
    - Impaired sleep
    - Higher perceived stress
    - A history of distressing life events
    - Being unprepared psychologically
    - Low self-efficacy in helping people with illness
    - Lack of knowledge about COVID-19
    - Failure to use proper precautions

    - Degree to which everyday life is impacted
    - Having people close to them with COVID-19
    - Lower family and social support
    - Disrupted income
    - Greater use of social media about the pandemic
- Job-related factors with increase depression and anxiety risk include
    - Working on the frontline
    - Intermediate hospital rank
    - Over 10 years of professional experience
- Post-traumatic stress risk increases with
    - Female gender
    - Living near heaviest impacted areas
    - Lower education
    - Poor perceived sleep quality

Suicide

The risk of suicide may increase as the pandemic spreads and the long-term psychological impact of COVID-19 is felt by individuals and families and especially, vulnerable groups (Gunnell et.al., 2020; Raman, 2020). It is therefore important that mental health professionals and first responders are prepared to intervene to prevent and respond to suicide crises.

The likely *adverse effects* of the pandemic on people with mental illness, and on population mental health in general, might be exacerbated by the following factors (Gunnell et.al., 2020):

- Fear
- Self-isolation
- Physical distancing
- Stigma towards those with COVID-19 and their families
- Psychiatric patients may experience worsening of symptoms or new mental health problems, especially depression, anxiety and PTSD
- Loss of employment and financial stressors
- Young people with interrupted education
- Increase in domestic violence and alcohol consumption
- Social isolation, entrapment and loneliness
- Loss and bereavement
- Irresponsible media reporting creating fear

While some people might seek help, others may fear that services are overwhelmed or that face-to-face interventions may place them at risk for infection. In some instances, social and mental health services may very well be stretched beyond their normal capacity to respond. It is important for services to ensure that clear policies and working procedures are in place to conduct remote assessments and care for people who are suicidal and their families.

The COVID-19 pandemic has placed many people's lives on hold and place especially older people at greater risk for loneliness (Harrington & Sliwinski, 2020). Prolonged loneliness is associated with increased risk for premature death similar to smoking, alcohol consumption and obesity. Other health consequences include elevated risk for heart disease and stroke. Loneliness may also contribute to cognitive decline, depression, poor sleep and increased risk of dementia.

Children

Children may also be at serious risk for developing post-traumatic stress disorder and other mental health conditions (Nagesh, 2020; The Childhood Trust, 2020). As children spend more time at home with their parents during lockdown, the opportunity for them to witness or endure domestic, physical or emotional abuse increases. This is especially concerning considering

some of the stresses that the pandemic has imposed on families, including financial hardship and increased alcohol use in the home. Children's mental health is also impacted as they themselves worry about contracting the virus, spreading it to family members and losing loved ones. Children and young people are reporting higher instances of depression, anxiety and loneliness.

As children have to transition to remote learning, those from disadvantaged backgrounds are more likely to fall behind and lose out on learning. They have significantly fewer resources, such as limited (or no) access to internet, limited supervision or educational guidance and an unstable environment in which to work. For children who experience food insecurity, the free meal they receive at school is their only hot meal for the day. Families are furthermore struggling to make up for this loss of food due to economic challenges and job losses. Families that are homeless or staying in temporary shelters also find it much more difficult to practice physical distancing and staying safe.

For children to recover from the crisis, physical well-being and the ability to play is crucial. Having access to outdoor space and spending time with other children can help them to heal from the stresses that COVID-19 placed on them (The Childhood Trust, 2020).

Experts from NCTSN provide recommendations for educators on implementing trauma-informed care principles in their interactions with children (Teaching Tolerance, 2020). These can also be very useful for parents of children and young people:

- Maintain and communicate predictable routines
- Relationships to take priority over behavioural compliance
- Support a sense of safety for children
- Be creative in helping children feel connected
- Encourage a sense of hope
- Promote self-awareness and encourage children to share how they feel
- Teach children self-soothing exercises
- Model and normalise a range of emotions

While most children are likely to experience an emotional impact from exposure to the COVID-19 pandemic and its consequences, some children are more vulnerable than others (Teaching Tolerance, 2020). Children with identified history of trauma may be especially vulnerable to significant negative impact, in addition to the following risk factors:

- Children who have had anxiety
- Children who have depression or suicidal ideation
- Children with learning and attention disorders
- Children whose families have lost jobs and income
- Children who have loved ones that are particularly vulnerable to COVID-19
- Children who have a caregiver who is a healthcare worker or in a profession where they are exposed to COVID-19
- Children who may be supervised less

Trauma

According to Springer (2020) COVID-19 and recent events have been traumatic for many people. *The future horizon has changed* as many people have suddenly found themselves dealing with survival level problems of Maslow's hierarchy of needs. Many people have lost their jobs, their income and their ability to care for their families. The negative economic impact of the pandemic also makes it much more difficult to find new employment as companies everywhere are facing the prospect of having to lay off staff. This threat to survival adds significant amounts of stress to the individual and the family.

Our essential priorities are in flux or in direct conflict. Many people face difficult decisions about two important priorities – earning a living and protecting those they love. As many people lose their jobs healthcare workers are perhaps more in demand, but their work places them at an increased risk of exposure to COVID-19 and therefore also increases the risk for the entire family. In this way, parents are torn between two highly stressful outcomes.

Doing nothing is harder for many than doing something hard. When people are unable to work and earn a living they may struggle with a loss of identity, and yet this is what most people have been asked to do during the pandemic. A sense of identity is formed and maintained in a network of interdependent roles and relationships. Social distancing over an extended period of time results in loss of a productive role in society and extended isolation can frustrate a sense of belonging and create feelings of burdensomeness.

Operating in defence mode leads to second-order effects. Hoarding of limited supplies creates a cycle of fear and anticipatory deprivation and is not a sustainable model of an economy. While people may disengage from the economy to seek safety, this creates the condition in which economic collapse becomes more likely. Although difficult, it is important for people to move out of a fight-or-flight response to have the full resources of their mind available for making difficult decisions, finding ways to keep connections with others alive and being creative in finding new ways to be productive.

Conclusion

The risk of infection with COVID-19 and its consequences on the physical health of people and economic impact on the economy of countries has thus far received most of our attention. However, the social and psychological impact of COVID-19 may far outlast the danger of infection and illness.

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