Psychological and Spiritual Review on Stress, Immunity, Mental Health Issues and Stress Management Strategies Related to Covid-19 Pandemic

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Abstract

Mental health is also a major field that can be identified under the definition of health. Mental health is not just the absence of mental illnesses. (Bos. E.H; Snippe. E; De Jonge, B; Jeronimus. B.F, 2016). According to the World Health Organization, mental health is “a state of wellbeing in which the individual realizes his or her own abilities, can cope with the normal stressors of life, can work productively and fruitfully and is able to make a contribution to his or her community.” (“Mental Health”, WHO). But with the arising of pandemic situations like COVID-19, a novel corona virus, individual mental health will tend to decrease gradually. Due to this, immunity which fight against these bacterial and viral diseases might reduce within the human body. Implementing strategies should be done in these kind of situations to manage the stress level within the community to control the pandemic situation and to boost the immunity within the society. And people who are having mental diseases should be given a special care during the COVID-19 pandemic in order to uplift the mental health of their current condition. This study has conducted as a case study in order to investigate the psychological and physical reasons that lead to reduce the immunity of the folks during the Covid-19 pandemic and to suggest the stress management strategies to overcome those issues and to boost wellness of the human being. As the problem statement, this study addresses the immune boosting and stress management strategies to cope up with Covid-19 with the objective of uplift the physical, mental and spiritual wellness of the folks within the society. So it can be concluded that minimizing stress, and related mental health issues will definitely help to boost the immunity and to uplift the mental health of the mentally ill people and to provide extra care during this Covid-19 pandemic.

Keywords: COVID-19, Pandemic, Corona Virus, Immunity, Psychological Stress.

Introduction

The health and well-being of populations and the state of the natural environment are two interrelated issues confronting humanity in the modern society. Natural environments sometimes lead to pandemics and it could be a leading cause to damage the balance between people’s mental and physical well-being. The World Health Organization (WHO) recognises the value of human behaviour in managing pandemics. Pandemics are large-scale outbreaks of infectious disease that can greatly increase
morbidity and mortality over a wide geographic area and cause significant economic, social, and political disruption. Evidence suggests that the likelihood of pandemics has increased over the past century because of increased global travel and integration, urbanization, changes in land use, and greater exploitation of the natural environment (Jones and others 2008; Morse 1995).

When investigating the word pandemic, the meanings of the related terms like outbreak and epidemic also should be known by folks. When an illness happens in unexpected high numbers it is known as an “outbreak”. It may stay in one area or extend more widely and can last days or years. Sometimes, experts consider a single case of a contagious disease to be an outbreak. This may be true if it’s an unknown disease, if it’s new to a community, or if it’s been absent from a population for a long time. When an infectious disease spreads quickly to more people than experts would expect then it is called as an “epidemic”. Pandemic is a disease outbreak that spreads across countries or continents that affects more people and takes more lives than an epidemic. The World Health Organization (WHO) declared COVID-19 to be a pandemic when it became clear that the illness was severe and that it was spreading quickly over a wide area.

The WHO’s pandemic alert system ranges from Phase 1 (a low risk) to Phase 6 (a full pandemic): This is the current WHO phase of pandemic alert for Pandemic (H1N1) 2009 is post-pandemic.

- Phase 1: A virus in animals has caused no known infections in humans.
- Phase 2: An animal virus has caused infection in humans.
- Phase 3: There are scattered cases or small clusters of disease in humans. If the illness is spreading from human to human, it’s not broad enough to cause community-level outbreaks.
- Phase 4: The disease is spreading from person to person with confirmed outbreaks at the community level.
- Phase 5: The disease is spreading between humans in more than one country of one of the WHO regions.
- Phase 6: At least one more country, in a different region from Phase 5, has community-level outbreaks.

![Figure 1. Pandemic Influenza Phases (2009)](image-url)
What is a Corona Virus?

Coronaviruses are a large family of viruses which may cause illness in animals or humans. Several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) among humans. The most recently discovered coronavirus causes coronavirus disease is COVID-19.

COVID-19 is the infectious disease caused by the most recently discovered coronavirus and this new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. COVID-19 is now a pandemic affecting many countries globally.

The Symptoms of Covid-19

The most common symptoms of COVID-19 are fever, dry cough, and tiredness. Other symptoms that are less common and may affect some patients include aches and pains, nasal congestion, headache, conjunctivitis, sore throat, diarrhoea, loss of taste or smell or a rash on skin or discoloration of fingers or toes. These symptoms are usually mild and begin gradually. The significant point in here is that some people become infected but only have very mild symptoms.

Most people (about 80%) recover from the disease without needing hospital treatment. Around 1 out of every 5 people who gets COVID-19 becomes seriously ill and develops difficulty breathing and older people, and those with underlying medical problems like high blood pressure, heart and lung problems, diabetes, or cancer, are at higher risk of developing serious illness. However, anyone can catch COVID-19 and become seriously ill. People of all ages who experience fever and/or cough associated with difficulty breathing/shortness of breath, chest pain/pressure, or loss of speech or movement should seek medical attention immediately. If possible, it is recommended to call the health care provider or facility first, so the patient can be directed to the right clinic.

People can catch COVID-19 from others who have the virus. The disease spreads primarily from person to person through small droplets from the nose or mouth, which are expelled when a person with COVID-19 coughs, sneezes, or speaks. These droplets can be considered as relatively heavy, do not travel far and quickly sink to the ground. People can catch COVID-19 if they breathe in these droplets from a person infected with the virus. This is why it is important to stay at least 1 meter) away from others. These droplets can land on objects and surfaces around the person such as tables, doorknobs and handrails. People can become infected by touching these objects or surfaces, then touching their eyes, nose or mouth. This is why it is important to wash your hands regularly with soap and water or clean with alcohol-based hand rub.

Practicing hand and respiratory hygiene is important at all times and is the best way to protect others and yourself. When possible maintain at least a 1 meter distance between yourself and others. This is especially important if you are standing by someone who is coughing or sneezing. Since some infected persons may not yet be exhibiting symptoms or their symptoms may be mild, maintaining a physical distance with everyone is a good idea if you are in an area where COVID-19 is circulating.
Covid-19 and Immunity

The immune system is the body’s multi-level defence network against potentially harmful bacteria, viruses and other organisms. The immune system keeps a record of every microbe it has ever defeated, in types of white blood cells (B- and T-lymphocytes) known as memory cells. This means it can recognise and destroy the microbe quickly if it enters the body again, before it can multiply and make you feel sick.

Some infections, like the flu and the common cold, have to be fought many times because so many different viruses or strains of the same type of virus can cause these illnesses. Catching a cold or flu from one virus does not give you immunity against the others.

Coronaviruses (CoVs) are by far the largest group of known positive-sense RNA viruses having an extensive range of natural hosts. In the past few decades, newly evolved Coronaviruses have posed a global threat to public health. The immune response is essential to control and eliminate CoV infections, however, maladjusted immune responses may result in immunopathology and impaired pulmonary gas exchange. Gaining a deeper understanding of the interaction between Coronaviruses and the innate immune systems of the hosts may shed light on the development and persistence of inflammation in the lungs and hopefully can reduce the risk of lung inflammation caused by CoVs.

Coronaviruses are enveloped, nonsegmented, positive sense single stranded RNA virus genomes in the size ranging from 26 to 32 kilobases, the largest known viral RNA genome. The virion has a nucleocapsid composed of genomic RNA and phosphorylated nucleocapsid (N) protein, which is buried inside phospholipid bilayers and covered by two different types of spike proteins: the spike glycoprotein trimmer (S) that can be found in all CoVs, and the hemagglutinin esterase (HE) that exists in some CoVs. The membrane (M) protein (a type III transmembrane glycoprotein) and the envelope (E) protein are located among the S proteins in the virus envelope. CoVs were given their name based on the characteristic crown-like appearance.

Figure 2. The structure of Corona Virus Virion
So COVID-19 as an infectious disease caused by the most recently discovered coronavirus, has a strong relationship with the immune system of the human body. To fight against the newly found coronavirus COVID-19, one’s immune system should be at a high level and the folks should be engaged in immunity boosting behaviors such as eating healthy foods, doing regular exercises, maintaining mental well-being, maintaining personal hygiene and having a good sleeping patterns etc.

The person should be in a good state physically, psychologically, and spiritually in order to fight against this newly founded COVID-19 corona virus.

**Psychological Stress and Immunity**

The great fear towards the COVID-19 can cause to damage the immunity of the individual since Stress, when we’re stressed, the immune system's ability to fight off antigens is reduced. That is why we are more susceptible to infections. The stress hormone corticosteroid can suppress the effectiveness of the immune system (e.g. lowers the number of lymphocytes).

Stress can also have an indirect effect on the immune system as a person may use unhealthy behavioral coping strategies to reduce their stress, such as drinking and smoking. During these COVID-19 pandemic most people tend to drink and smoke to reduce their stress. But a high risk can be identified among the people who are engaging activities like drinking and smoking. And also Stress is linked to other diseases like: headaches; infectious illness (e.g. ‘flu); cardiovascular disease; diabetes, asthma and gastric ulcers.

As declared by WHO, The crucial method in breaking the chain of infection is effective separation of infected individuals and suspected or actual carriers from the unaffected populations. This break of physical contact can be achieved in several ways. When the isolation is not absolute, but rather, measures are limited to reducing and minimizing contact and exposure, the term social distancing is sometimes used. Social distancing also sometimes refers to all measures used to reduce contact, including isolation and quarantine.

Book of Leviticus, which likely dates from the seventh-century Old Testament, asserts: “As long as they have the disease they remain unclean. They must live alone; they must live outside the camp.” (Leviticus 13:46: NIV). But when considering the methods like social distancing, self-isolation and quarantine process, these also can make people more stressful and it can be a leading factor to decrease the immunity and to emerge various other diseases like heart diseases, diabetics and high blood pressure etc.

When investigating the previous mentioned methods vividly, it is a must to know the meanings of the terms in order to get an idea that how these will affect the mental health of the people in a negative way. Isolation is a method that separates ill persons who have a communicable disease from those who are healthy. Isolation restricts the movement of ill persons to help stop the spread of certain diseases.

Quarantine, on the other hand, separates those who are still healthy, but possibly exposed to an infective agent, from those who are healthy and have not been exposed. It is a restraint upon the activities or communication of persons or the transport...
of goods designed to prevent the spread of disease or pests. Quarantine has a long history, but has likely been introduced as a public health measure during the Black Death in 1377 by the City-state of Dubrovnik (then Ragusa) by making the arrivals spend a 30-day period (trentina) on a nearby island of Lokrum. This method was adopted by other maritime city-states the time (e.g., Venice, Genoa) and the period was extended to 40 days (quarantina). Why the exact period of 40 days was ultimately chosen remains unknown and the theories aimed at explaining this figure range from Pythagorean numerical tradition to Biblical references. (Tognotti.E, 2013).

So when a person is self-isolated and quarantined for a long period of time the individual’s mental health will tend to rapidly decrease with the fear of the COVID-19 pandemic. So in order to protect the mental health of the people and to boost the immune system, several activities can be done for the mental and physical wellness of the individual.

**Strategies to Overcome Stress during COVID-19**

1. Help children find positive ways to express feelings such as fear and sadness. Every child has their own way to express emotions. Sometimes engaging in a creative activity, such as playing, and drawing can facilitate this process. Children feel relieved if they can express and communicate their feelings in a safe and supportive environment.

2. Try and use helpful coping strategies such as ensuring sufficient rest and respite during work or between shifts, eat sufficient and healthy food, engage in physical activity, and stay in contact with family and friends.

3. Avoid using unhelpful coping strategies such as tobacco, alcohol or other drugs. In the long term, these can worsen your mental and physical wellbeing.

4. Protect yourself and be supportive to others. Assisting others in their time of need can benefit the person receiving support as well as the helper. For example, check-in by phone on neighbours or people in your community who may need some extra assistance. Working together as one community can help to create solidarity in addressing Covid-19 together.

5. Minimize watching, reading or listening to news that causes you to feel anxious or distressed; seek information only from trusted sources and mainly to take practical steps to prepare your plans and protect yourself and loved ones. Seek information updates at specific times during the day, once or twice.

6. Keep children close to their parents and family, if considered safe for the child, and avoid separating children and their caregivers as much as possible.

7. Maintain familiar routines in daily life as much as possible, or create new routines, especially if children must stay at home. Provide engaging age appropriate activities for children, including activities for their learning. As much as possible, encourage children to continue to play and socialize with others, even if only within the family when advised to restrict social contract.

8. For Older adults, care providers and people with underlying health conditions, Share simple facts about what is going on and give clear information about how to reduce risk of infection in words older people with/without cognitive
impairment can understand. Repeat the information whenever necessary. Instructions need to be communicated in a clear, concise, respectful and patient way. It may also be helpful for information to be displayed in writing or pictures.

9. Learn simple daily physical exercises to perform at home, in quarantine or isolation to maintain mobility and reduce boredom.

10. Keep regular routines and schedules as much as possible or help create new ones in a new environment, including regular exercising, cleaning, daily chores, singing, painting or other activities.

11. For people in isolation, Stay connected and maintain your social networks. Even when isolated, try as much as possible to keep your personal daily routines or create new routines. If health authorities have recommended limiting your physical social contact to contain the outbreak, you can stay connected via e-mail, social media, video conference and telephone.

12. During times of stress, pay attention to your own needs and feelings. Engage in healthy activities that you enjoy and find relaxing. Exercise regularly, keep regular sleep routines and eat healthy food. Keep things in perspective.

13. Being proactive by following basic hygiene principles can keep your anxiety at bay. The World Health Organization recommends a number of protective measures against the coronavirus, including to:
   ➢ wash your hands frequently
   ➢ avoid touching your eyes, nose and mouth
   ➢ stay at home if you begin to feel unwell until you fully recover
   ➢ Seek medical care early if you have a fever, cough or experience breathing difficulties.

14. Practise self-care-To help encourage a positive frame of mind, it is important to look after yourself.
   ➢ Maintaining good social connections and communicating openly with family and friends
   ➢ Making time for activities and hobbies you enjoy
   ➢ Keeping up a healthy lifestyle by eating a balanced diet, exercising regularly, getting quality sleep and avoiding the use of alcohol, tobacco and other drugs to cope with stress
   ➢ Practising relaxation, meditation and mindfulness to give your body a chance to settle and readjust to a calm state.

15. Positive thinking-Evidence shows that people who believe they are doing better actually do better than those who have the same physical condition but aren’t as positive. Research also suggests that anxiety, hostility, and other negative states affect the immune system.

**Religious/ Spiritual Practice for Stress Reduction**

A codified set of beliefs and practices shared by a group of individuals regarding their relationship with a Higher Power (or powers) can be identified as a “religion”. Spiritual and religious people find various ways to express these qualities by praying, attending religious services, interacting with people who share the same beliefs, meditating, viewing or making art or music, visiting nature, etc. Spirituality can decrease stress, by allowing a person to:
1. **Give up control**-Believing in something greater than ourselves allows us to realize that we aren't responsible for everything that happens in our lives. Bad things and good things will happen no matter what, through no fault (or through no specific effort) of our own. Spirituality can allow us to release (or at least decrease) the need to always blame ourselves for bad times and/or continuously scramble to achieve good outcomes.

2. **Create a sense of quiet, stillness, and peace**-Time spent meditating, praying, or just appreciating what is around and within us in that given moment can allow space to detach from and find perspective on stressors, enhance our sense of awe at the amazing world that is around us, as well as give us time to gain some or all of the other positive benefits described next.

3. **Enhance a sense of connectedness**-Feeling a part of something greater than ourselves can make us feel less isolated and alone. In addition, many people who belong to religious and/or spiritual groups receive social support benefits (interpersonal interactions; group activities; mentoring; help with money, food, transportation, respite, etc. in times of need).

4. **Gain perspective**-Spirituality helps us to clarify our values, and focus on related goals that are important, rather than becoming consumed by material things or circumstances that are truly unimportant.

**Ways to Cultivate the Spirituality of the Individual**

1. Using prayer, meditation and/or relaxation techniques on a routine basis.

2. Striving to see the good in other people and in yourself.

3. Seeking out a trusted adviser or friend, or reading inspirational stories or essays to learn how to lead a fulfilling spiritual life.

4. Sharing your spiritual journey with loved ones, and invite them to discuss their journey with you. During these discussions, remember that different people travel very different spiritual paths; try to resist the temptation to view and behave as if your particular path is the best (or only correct) way.

**Discussion**

The high number of people who sicken and die and vast economic losses associated with an epidemic or pandemic lead to a high psychosocial risk. So the folks who are suffering from illnesses and the people who are more like to provoke mental illnesses both categories should be handle carefully in order to protect the mental health during these pandemic situations.

So when considering the other pandemics which aroused in the ancient periods like Ebola, HINI, Small pox etc. Mental health patients who are in the community are at risk for developing more anxiety about the arriving pandemic, particularly if they are already treated for anxiety spectrum disorders. Worrying about pandemic can lead to a worsening of existing mood disorders, such as depression.

One chart review study from the 2009 H1N1 influenza outbreak revealed that children receiving mental health care and patients with neurotic and somatoform disorders may be particularly vulnerable to psychological effects of infectious disease epidemics. . (Tognotti.E, 2013).
Patients who are seriously mentally ill and who are particularly concerned about the consequences of the outbreak may break with their compliance and risk relapses of serious mental illnesses such as schizophrenia, schizoaffective disorder, or bipolar disorder. Patients may demonstrate impairment of judgment, become reckless and engage in risk-taking behaviors. The risk of such behaviors may be accentuated in the context of an outbreak.

Because of reckless behavior associated with impaired judgment or because of poor self-care due to the chronicity of their illness, mental health patients may have difficulties following general public instructions and orders and put themselves at risk for violating various measures aimed at mitigating the outbreak.

For patients with substance abuse problems, particularly those on maintenance therapies, uninterrupted delivery of medications could create a significant problem. Some of the options include detoxification prior to the arrival of an outbreak or stockpiling medications with patients for prolonged use; each coming with its own set of risks and complications.

Even after the crisis subsides, the outbreak leaves profound psychological effects in its wake. While little population studies exist, what is known from the population surveys in Taiwan following a SARS outbreak in 2003 suggests a more pessimistic outlook on life in about one-tenth of the population in the months following the outbreak. Pre-existing psychiatric conditions, demographic factors (age > 50), high-school education, perceived preparedness, and personal experiences with the outbreak all contributed to psychological distress.

Those who were directly affected by the illness show significantly higher rates of psychological squeal. Cumulative psychiatric morbidity among SARS survivors approached 60% 3 years after the outbreak, while the point prevalence at 30-months was about 33% (one in three), with one in four survivors suffering from PTSD and about 16% from depressive disorders.

The incidence of mental health squeal was studied in the aftermath of the Ebola outbreak in West Africa. One study found that 6% of the survivors, family members, and caretakers met the clinical cut-off for anxiety–depression 1 year after the outbreak, while 16% met levels of probable PTSD.

So when considering these factors it can be said that there is a high risk for those who are seeking help or medications for mental illnesses to get worse the prevailing conditions of them. As example, a person who is suffering from obsessive compulsive disorder might engage in the activity of washing hands due to this COVID-19 outbreak since it is a part of hygiene factor that should follow in order to prevent from Covid-19 pandemic. So in these situations, their condition might get worse so stress management strategies should implement for the caregivers and also for the family in order to control the prevailing situation.

The ability to fend off illness and disease depends on several factors, some of which are beyond our control, but the way we react to stress and the general health of our immune system are things we can influence. If we’re not able to change our response to stressors, we’ll find ourselves in a constant hormonal battle that will lead to serious health issues like hypertension, diabetes, and heart disease. The brain and the immune system are in constant communication in
this delicate balance that can be disrupted by any kind of physical or emotional stress. So it can be said that by following stress management strategies, there is a high chance to boost the immune of the human body that can fight against the COVID-19 pandemic and to increase the wellness of the physical and emotional.

**Conclusion**

When investigating the newly found corona virus type, COVID-19, it is clearly depicted that people tend to be more stressful and anxious about the current situation of the area, country or the world. And also sometimes the victims of Covid-19 are treated badly by the society by considering them as criminals. This due to the stress and panic within the community that they might also get infected by others. But the negative point in here is that when an individual is continuously exposed to stressful life situation their mental, physical, emotional and spiritual health will get degraded day by day. So this will be a leading cause to reduce of immunity within the human body to fight against this pandemic. So maintaining balanced emotional, mental, spiritual and physical wellness is very important during this severe pandemic stage.

And the media should be responsible when revealing the COVID-19 patient’s identity since their family members might get more troubles from the community since they are also in fear of getting caught by the deadly virus COVID-19.

While taking care of the individual who are more prone to get mental illnesses like stress, anxiety, Obsessive Compulsive Disorders, the patients who have prevailing mental conditions should also take care since otherwise their condition might get severe during this pandemic. So extra care should be given to them in order to uplift their mental wellness. So the previously mentioned stress management and spiritual practices strategies might help the folks within the community to overcome the stress and to maintain a proper mental health within the society.

**References**


