

IN THE EYE OF THE STORM: USE OF MENTAL HEALTH AND PSYCHONEUROIMMUNOLOGY AS VACCINES IN HANDLING THE COVID19 CRISIS IN PAKISTAN

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In the troubling times that we are living in at present, mental health and the concept of Psychoneuroimmunology (PNI) has gained even greater importance for the community than ever before. Knowing that emotional states can affect immunity is crucial in times when the Covid 19 outbreak is creating panic, fear, stress and loneliness, as much as potential physical morbidity, and mortality.

Amidst the debate: mind or body, it is irrefutable that the brain is a powerful organ and essentially controls all functions in the body. Our brain is known to also control our neurohumoral mechanisms that influence our immune system. This is called psychoneuro-immunology or PNI. Evidence shows that psychosocial adversity and negative emotions can affect the brain and in turn, weaken the immune system, thus, increasing the susceptibility to diseases, particularly those challenging our immunological status¹. The PNI paradigm suggests that health is multifactorial². Any treatment, in order to be effective must include the 'psyche' of the person, as it will determine either the strengthening of the immune system or the weakening of its response³.

There are many examples of how our psyche and physical health are connected. Meta analyses have found that people suffering from HIV⁴ and Cancer⁵ with greater psychosocial support and lower levels of stress^{6,7} have better treatment outcomes. Wound healing is significantly faster when there is less fear or stress⁸. Gastrointestinal problems, skin itching and eczema, depression, hypertension are all linked with the stress response of our body⁹.

Under normal circumstances, your body, when faced with pathogens such as bacteria, provoke a humoral response while when faced with a virus, produce a cell-mediated response. Antiviral immunity is particularly complex because both cellular and humoral immunity are required for resistance. The body produces specific cytokines to deal with viral challenges and these are essential in the generation of the immune response of the body¹⁰. The hypothalamic-pituitary-adrenal (HPA) axis controls the body's reactions to stress, mood, sexuality, digestion and the immune system. In the event of prolonged stress, the HPA axis and the sympathetic nervous system increase the levels of glucocorticoid and catecholamines which inhibit the secretion of proinflammatory cytokines and increase the secretion of anti-inflammatory cytokines, thereby, reducing the body's inflammatory responses and contributing to susceptibility to diseases¹¹. Research has found stress to play a pivotal role in immune alterations. This means that due to a stressed body's inappropriate response to viruses, the stamina, performance and durability of otherwise healthy individuals is affected, leaving them with increased incidence, severity and/or duration of numerous health conditions¹².

In January, 2020, WHO declared a global state of emergency, by accepting that the Corona virus infection has become pandemic. Since then, Pakistan has now reached a total of 733 cases (and counting) afflicted by the corona virus with numbers rapidly growing¹³.

Social media and the news channels are in frenzy, and are busy releasing a headline every minute about growing number of deaths, lack of safety, lack of resources, the potential apocalypse of loss of all controls and imminent danger all around us. In the wake of crisis, pandemics such as the COVID19 cause unique psychological reactions, ranging from immature defence mechanisms of denial, blame, dissociation, displacement, and paranoia to more mature ones like sublimation, altruism, suppression, humour and anticipation. While the former can adversely affect mental health and thus, compromise an individual's immune response, the recruitment of the latter can greatly enhance positive mental health and result in a more robust immunological response to the Corona virus infection.

COVID19 is young and unpredictable with very little known about its nature, making normal reactions worse as they are based on perceived risk and fear rather than factual data. Fear based stress reactions and uncertainty results in behaviours such as fear of illness and death, seeking help and getting quarantined, catching the infection or passing it on to someone else, and feelings of helplessness and depression from staying in prolonged isolation.

History has shown time and time again, that at the brink of crisis, evolution is fast forwarded. Humans experience adaptations that would otherwise take decades to take place. In order to deal with this pandemic, mental health and psychosocial considerations need to be part of the core public health response. The Inter Agency Standing Committee describe these considerations as any type of local or foreign support that aims to protect or promote psychosocial well-being to prevent or treat mental consequences of the pandemic¹⁴. The national action plans to deal with the Corona Crisis must target responses that are not only focused on screening, diagnosis and treatment of Covid 19, but also at the mental health and psychosocial issues expected in such a crisis. The National Health Action plan should be based on lesson learnt from international experience, yet must contextualise it to the cultural and social realities and needs of Pakistan. The measures we take as a nation may feel temporary, but 'temporary measures have a habit of outlasting emergencies'¹⁵. The WHO has uploaded a document addressing the Mental Health and Psychosocial Considerations During the COVID-19 Outbreak which highlight the steps that need to be taken at an individual as well as at a state level for both health workers and the general population¹⁶. These are overwhelming times and stress-based reactions will only worsen our immunity and make us more susceptible to the outbreak.

While planning to deal with the current outbreak we must also think about the aftermath of it and have psychosocial support available. With death tolls rising and resources in the country lacking, we must plan for people's reactions to a 'failure to respond'. This failure can be perceived as ranging from a failure to provide essential aid to failure to prevent the viral spread in time. The response steps must, therefore, cover four phases: preparedness, early outbreak response, later response and recovery, and mental health intervention planning¹⁷. Preparedness will cover public awareness campaigns, preparing the government for the crisis to come and mobilising resources. In the second phase (the current phase in Pakistan) we must now disseminate informed and carefully worded information and guidelines from a central agency without allowing media frenzy, normalise stress-based reactions and foster resilience, hope and caring attitudes. We must start: entrusting people to keep themselves and others safe, sharing our resources, protecting others rather than keeping ourselves safe, self-monitoring rather than be nationally surveyed, keeping in touch virtually rather than feeling either isolated or violating social distancing rules and most importantly, staying calm. The phase to come will require maintaining a sense of community; support groups, creating a routine to increase feelings of normalcy and managing fatalities with as much respect to sociocultural norms as possible. The last phase will require psychological interventions. The aftermath of the pandemic will have people with high levels of anxiety and will need support. In light of the limited number of mental health professionals in the country, the nation will have to come together and support each other. Inviting the public to be healers will not only create confidence but also provide an opportunity for personal growth and resilience. The media can be used as a positive force to instil hope and provide instructions on how to proceed in a post-pandemic world. Caution will still be needed so education and awareness on protective measures to prevent reinfection, rationalising fears and building trust in the authorities will be crucial. The WHO's steps of psychological first aid by establishing safety, empowering individuals and family to care for themselves, self-calming to reduce stress, maximising social and familial support and fostering factual perceptions of the crisis will have lasting positive effects.

We must also be mindful of the efforts of our first responders and healthcare staff and ensure that they are not overlooked when providing psychosocial support. Staff should be working in shifts of high intensity to low intensity so as to prevent burnout, taking care of themselves and sufficiently resting, taking support from fellow colleagues in similar situations and using stress coping techniques to mitigate the crises. These are times where the doctors, nurses, paramedics and all health professionals are risking their health, happiness, safety and lives to fight the war against COVID19. They need to protect themselves not only physically but also take steps to protect their mental health. Using stress coping techniques, finding small durations of time in between their hectic schedules to connect with their families, slowing down their heightened emotional states, mindfulness and relaxation exercises, using deep breathing exercises, taking regular rest, can all help. Due cognisance and awareness of early signs of distress and burnout should be identified by themselves as much as by their colleagues. Care of the carers is as crucial as the care of the patients.

Denial or fear reduces our ability to fight off disease whereas caring for one another, having hope, feelings of love and concern can all make our immunological responses more robust.

Scientifically driven informational care packages alongside a positive state of mental health can serve as potent 'vaccines' that each individual is equipped with in order to enhance their immunological response. In preparation to deal with the COVID19 crisis, mental health professionals of Pakistan Psychiatric Society need to raise awareness in the nation and help launch a national campaign to immunise the Pakistani nation with these two 'vaccines'.

The decisions that we make now will determine what our world will look like when the storm is over. COVID19 will be remembered in history like Ebola, SARS, H1N1, Zika and MERS. We can either stand alone, no support, resist the inevitable, or we can stand together and survive.

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