



Diseased Body and Diseased Mind: Mind Your Psychological Health during Lockdown

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The novel Corona virus also known as 2019-nCoV that originated in China in December 2019 has quickly spread all over the world. In absence of specific treatment or vaccine, with no natural immunity, we are forced to rely on old public health measures like Quarantine, Social distancing and Isolation for prevention of spread among community. Although isolated incidents of epidemics have required isolation and quarantine in the past, no pandemic has required social distancing to a national and international scale before. Despite the obvious physical health and economic concerns of this situation, all the above measures bring forth challenges of emotional and psychological nature which can be especially severe in special populations like elderly, young children and adolescents, health care workers, persons with mental illness. Also, certain aspects like death, role of mass media, and ethics also arise during isolation and quarantine. With mass media playing a significant role in drumming up the perceived threat, people may resort to panic behaviours like

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hoarding essential day to day use items and masks and other medical supplies leading to shortage. Problem of fake news related to COVID 19 lead to Govt. of India launching of AAROGYA SETU app as well as websites to centralise all COVID 19 related information to people of India. Death in isolation deprives family members and friends of opportunity to grieve for near and dear ones lost due infection or due to natural causes. The requirement of isolation and quarantine during this distressing pandemic has paved way for recognising the importance and advantages of telemedicine as a whole which has led to various government bodies including the Government of India to draw primary guidelines for medical practitioners to follow and ensure ethical concerns are addressed.

Keywords: COVID-19 19; Quarantine; Social Isolation; Psychological Problems; Anxiety; Depression.

1. INTRODUCTION

The novel coronavirus also known as 2019-nCoV that originated in Hubei, a province in Wuhan, China in December 2019 has quickly spread all over china and was exported to more than 20 countries by then end of January 2020. The transmission of 2019-nCoV is through respiratory droplets, with a similar incubation time and generation time as SARS coronavirus [1] On 21th January 2020, WHO announced that 2019-nCoV was possibly sustained through human-to-human transmission, warning the public to take self-protection measures. This disease was rapidly shown to cause an epidemic [2].

On 11March 2020, the World Health Organisation declared COVID -19 a pandemic with spread in more than 114 countries [3]. And when faced an outbreak with a closely related virus with no specific drugs or vaccines, we are forced to rely on public health measures to stop the respiratory disease epidemic. These public health measures are aimed at preventing person to person spread of the disease by separating people to interrupt the ongoing transmission [1].

2. HISTORICAL PERSPECTIVE

The word *quarantine* comes from *quarantena*, meaning "forty days", this word was first used in the 14th-15th-century in Venetian language. These forty days was a period where all ships were required to be isolated before anyone could go ashore during the Black Death plague epidemic. Lazaretto meaning quarantine station was a term born in Venice. This term came into play as travellers who arrived by sea were subject to quarantine on an island for a period of 40 days [4].

However, origins of mass isolation lie in mid 14th century during the Great plague that resulted in nearly one third of Western European deaths.

In 1738, New York City acquired Bedloe's Island for purpose of its own quarantine practices, in order to protect New York from smallpox and other alignment fevers [4]. Most recent examples of effective use of quarantine were the plague epidemic in Surat in 1994 and SARS epidemic in 2003 in Canada, China and Taiwan.

Isolation is defined as the separation of ill persons with contagious diseases from non infected persons. This is done so as to interrupt the transmission to non infected persons. isolation is effective in protecting or restoring public health, it can also contribute to protecting human and national security. Human security is to be understood as "safety from constant threats of hunger, disease, crime and repression".

Quarantine is the restriction of persons who have currently been asymptomatic so as to reduce potential transmission from exposed persons before symptoms occur. Quarantine of groups refers to quarantining people who have been exposed to the same illness. Working quarantine refers to people who are at occupational risk. Community wide quarantine refers to closing community borders either virtually or physically to prevent further spread.

Social distancing is an intervention applicable to an entire community, city or region so as to reduce personal interactions and movements. This practice decreases the mixing of asymptomatic carriers with non-infected community members [5].

2.1 Indian Perspective

Recent experiences in quarantine and social isolation in India include the plague outbreak in Surat [6]. in 1994, in Himachal Pradesh in 2002 ,2004 in Uttarakhand [7] and the Nipah virus outbreak in Kerala in 2018 [8]. All these illnesses

were localised in nature and did not require the extent of isolation and quarantine being practised both in India and worldwide currently in March 2020 in response to COVID 19.

2.2 Psychosocial Perspectives

Various studies have demonstrated high rate of psychological and emotional problems in patients quarantined for infectious illness with a high mortality rate. Most of psychological problems occur not only during quarantine and isolation period but extend further even after the disappearance of illness and hence the important role to be played by Disaster Mental Health Services [9].

Pandemics cannot be just considered a medical phenomenon in isolation, as they cause significant disruptions in individual as well as society and may lead to Stigma and xenophobia. Panic and stress have also been linked to such outbreaks. With mass media playing a significant role in drumming up the perceived threat, people may resort to panic behaviours like hoarding essential day to day use items and masks and other medical supplies leading to shortage. This often follows anxiety behaviours, disturbances in sleep and activities of daily living [10].

3. EMOTIONAL IMPACT OF QUARANTINE AND SOCIAL ISOLATION

Social Isolation and Quarantine in wake of Covid-19 epidemic, whether forced or voluntary, have been a source of considerable stress to all populations world-wide. Uncertainty regarding treatment and absence of specific vaccines and medications along with non-existent immunity

due to a Novel Virus has contributed significantly to considerable anxiety, fear and worry regarding contraction of infection [10].

A study conducted by Jeyong et al evaluated mental health status of persons quarantined for MERS in South Korea for anger symptoms and anxiety ,both during isolation and also four to six months after quarantine and found significantly higher rates of anxiety and anger among patients as compared to quarantined contacts .Higher anger rates were found to persist at 6 months for people with significant financial losses , past history of mental health problems and those who received inadequate food and medical supplies during quarantine and isolation, indicating a role of preventive services in future morbidity [11].

Xiao et al conducted a study in Central China in January 2020 on self socially isolated contacts of patients suffering from Covid 19 for a period of 14 days and found significant increase in levels of anxiety, stress and impaired quality of sleep especially in those having low social capital, indicating a role of social support in mental health of socially isolated individuals [12].

A systemic review with meta-analysis of over 26 papers was done by Pursell et al studying the impact of hospitalised isolation patients found that majority of studies reported significant declines in mean scores related to control and self-esteem and in many studies increases in the mean scores for risk of anxiety and depression. Overall, the systemic review concluded that isolation had a negative impact on patient's wellbeing [13].

Table 1. Commonly used Public health measures adapted from Wilder-Smith & Friedman [1]

	Definition	Objective	Setting
Isolation	Separation of ill persons with contagious diseases from non-infected persons	To interrupt transmission to non-infected persons	Effective for diseases with high person-to-person transmission were peak transmission occurs in symptomaticcases
Quarantine	Restriction of persons who have been exposed but currently asymptomatic	To reduce potential transmission from exposed persons before symptoms occur	Used in settings where detection of cases is prompt, contacts can be traced within a short time frame and quarantined
Social distancing	Intervention applied to an entire community, city or region, designed to reduce personal interactions and movements	Decrease mixing of asymptomatic carriers with non-infected community members	useful in settings where community transmission is substantial

Till 24th April 2020 at least 5 suicides have been attributed in India to fear of Corona Virus infection [14-16]. Surprisingly more painful was a male person committing suicide presuming that he is infected with COVID 19 but later on his report came to be negative. Also significant cases of rise in cases Obsessive compulsive disorder have been reported by Psychiatrists due to germ phobia arising out fear of contracting of COVID19 [17].

4. SPECIAL POPULATIONS

a) Elderly and small / young children

Older adults, who are in isolation or quarantine may develop more anxiety and become angry, stressed, agitated and withdrawn, especially those who suffer from cognitive decline or dementia. Older people may require intensive outpatient or in-patient counselling by trained mental health professionals along with good family support during epidemics [10]. Fear of COVID19 has led to incidents of suicide among elderly [14].

As schools and colleges are shut down during quarantine, there arises problem of loss of educational as well as personal development of children due to shutting down of all playgrounds, gyms and outdoor recreational activities. Home confinement of children as well as adolescents can lead to increased anxiety, restless, increased screen time, loss of contact with same age peer groups like friends and classmates. Role of good parenting skills, involvement of confined and isolated children in home schooling via online educational activities, allaying of fear and worry related to ongoing pandemics through discussion and education about prevention play a huge role in easing of stress among children and adolescents [18].

b) Health Care workers and Volunteers

Health workers, especially working in quarantine wards and involved in treatment of patients suffering from COVID 19 exhibited increased levels of exhaustion, anxiety, fear of getting infected while caring for patients suffering from COVID 19, decreased sleep quality, and feelings of guilt involving fear of transmission of

infection to their families, co-workers, other staff.

Studies conducted on medical care staff in China demonstrated increased worry among health care workers regarding adequate availability of good quality protective gear, increased work load of critically ill patients [19].

A study conducted by Xiao et al on medical staff treating patients infected with COVID19 in Wuhan clearly demonstrated the relationship between good social support, good sleep quality and lowered levels of anxiety, stress and self-efficacy [12].

Availability of psychological services in form of free online counselling services for health care workers, along with training healthcare workers in stress releasing exercises and identification of warning signs of burnout are some of the measures suggested to handle increased work related stress [19].

Lai et al studied factors associated with mental health outcomes in health workers exposed to COVID 19 patients and observed incidence of depression , anxiety ,insomnia and distress with all these symptoms being higher among female gender , nurses [20].

c) Migrants and travellers

Given the importance of travellers and migrants in transmission of COVID19, special attention has been given to identifying travellers with or without symptoms of COVID19. Most studies have established the efficacy of exit identification to entry identification of travellers for effective control of COVID19 [21].

Problems involving migrant workers include joblessness, inability to travel to places of domicile, dependence on Government and local authorities for provision of essential supplies during lockdown, separation from family members, uncertain future and increased worry about contracting illness. A migrant worker hailing from Madhya Pradesh who was working in Gujrat,

chopped off his tongue in a temple to please the Deity to stop spread of COVID19 in India [22].

d) Person with Mental Illness

Patients suffering from mental illness are at a higher risk for contracting infectious illness than general population due to cognitive impairment leading to decreased awareness of prevention measures, malnutrition leading to decreased immunity, difficulty associated with identifying symptoms, restrictive living conditions and stigma associated with help seeking especially in psychotic illnesses. Once infected, patients with mental illness may further be at a disadvantage due to stigma, and difficulty in managing treatment. As overall general population suffers from higher levels of anxiety, stress and fear during Isolation, these problems are amplified even more in patients suffering from mental illnesses [23].

People suffering from substance use disorders suffer from significant craving and may land up in withdrawal due to non availability of legal as well as illicit substance of abuse. A study conducted at a tertiary health care centre indicated doubling of cases of alcohol withdrawal during lockdown period in India.

e) Severely medically / physically / ill

Patients suffering from various medical illness are not only at high risk for contracting COVID19, but also likely to suffer from unavailability of health care services either due to social isolation as many hospitals grapple with higher workload of infectious cases during an epidemic.

A study conducted by Kim et al in South Korea found higher levels of stress markers in patients admitted for haemodialysis undergoing isolation secondary to MERS outbreak [24].

f) Death in Isolation & Quarantine

As social isolation and quarantine are being widely practised to combat rise of COVID 19 pandemic, special focus has

been shifted to deaths occurring among patients and old persons. Death in isolation deprives family members and friends of opportunity to grieve for near and dear ones lost due infection or due to natural causes. Also protocols for disposing off of dead bodies of persons dying due to COVID19 infection by incineration to prevent transmission of infection many times involves change in socially and culturally accepted rituals for many. Many times, body is not given to close family members for religious rituals which may lead to increased anger and feelings of guilt among close family members.

Role of health care workers in facilitating contact among critically ill person and family members utilising internet is of importance and hospital staff should be sensitised regarding this issue [25].

Another issue is denial of burial in community burial grounds to patients dying of COVID19 by local communities for fear of transmission has been reported in many cities in India [26]. Higher number of mortalities due to COVID has led to countries like Iran resorting to mass graves [27].

5. RISK PERCEPTION AND QUARANTINE ATTITUDES

A survey conducted by Kim et al to assess risk perception and attitudes of public towards isolation and quarantine during MERS outbreak in South Korea demonstrated largely unfavourable attitude among public regarding quarantine , neglect of quarantine rules set by local authorities during the initial part of outbreak suggesting ethical concerns to curtailment of freedom of movement [26].

6. ROLE OF INTERNET, MASS-MEDIA AND TELE-MEDICINE

On 25th March 2020, BOARD OF GOVERNORS in supersession of the Medical Council of India, issued telemedicine guidelines to be followed in view of ongoing pandemic following social distancing guidelines wherever possible ,paving way for telemedicine and use of internet as a treatment tool for management of patients and drugs to be prescribed from a distance [28].

The mass media can play an effective role not only about prevention but also awareness of methods involved in control of disease spread.

A study of people isolated for Middle East respiratory syndrome (MERS) found that while access to telephones reduced anxiety and anger; access to email, text and internet increased these [13].

Problem of fake news related to COVID 19 lead to Govt. of India launching of AAROGYASETU app as well as websites to centralise all COVID 19 related information to people of India [29].

7. CONCLUSION

The requirement of isolation and quarantine during this distressing pandemic has paved way for recognising the importance and advantages of telemedicine as a whole which has led to various government bodies including the Government of India to draw primary guidelines for medical practitioners to follow and ensure ethical concerns are addressed.

CONSENT

It is not applicable.

ETHICAL APPROVAL

Compulsory Quarantine and Social Isolation enforced by Local as well as Central Governments often raise ethical questions as they limit freedom of movement which is considered a fundamental basic human right .However, primary responsibility of health matters of public fall under the purview of respective Governments and benefits of Social Isolation and Quarantine far outweigh ethical considerations [5,30,31,32,33,34].

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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