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COVID-19: Impact on transport and mental health

Pandemics are more than just pathological medical phenomenon. Pandemics appear with various challenges and entail other devastating situations. Ever since the World War II, the world did not face any extreme challenge as threatening as COVID-19. SARS-CoV-2 (as named by ICTV) possesses a high basic reproduction number ($R_0$) and has confirmed routes of droplet-borne air transmission and contagious spread from one to another human. Due to no prior exposure to this pathogen (COVID 19) and unavailability of vaccines of the same, every individual across the world has become vulnerably susceptible to SARS-CoV-2. Hence, the World Health Organization (WHO) and healthcare authorities of all countries are relentlessly emphasizing on practicing basic personal hygiene, the use of face-masks and personal protective equipments (PPEs), social distancing and self-quarantine as protective and preventive measure against COVID-19. This is supposedly to be professed and practiced until a vaccine arrives in the market to provide herd-immunity. Besides, most of the countries have been under the stringent internal/external movement restriction. Even though the practice of intermittent lockdown is helping countries to flatten the epidemic curve, but its effect is not providing a satisfactory result. The gravity of the pandemic has taken toll on economy, transport industry, education, and people’s psychosomatic well-being.

Of late, the World Health Organization (WHO) urged ‘all countries to continue efforts that have been effective in limiting the number of cases and slowing the spread of the virus’ (WHO, 2020a). The practice of complete and partial lockdown has also been taken up as an important strategy to restrict the spread of the COVID-19 virus among the population across countries. Additionally, the individuals who commute national and international borders are directly put into self-isolation or remain quarantined for at least 14 days before they resume to their workplace. To validate social-distancing, a ban on frequent inter-state travel and entry of international flights has been restricted. A report stated the slump in air traffic by 63% in the last week of March 2020; much less compared to the last year (BBC news report, 2020). In addition with the halting transport any kind of mass gatherings have been restricted. Strict vigilance of military and police force have been employed to keep control on the frivolous movement of the civilians across the streets. Apart from extreme emergencies airway and terrestrial transportation have been lessened in number. Certain sectors like grocery shops, banks, and pharmacies have been exempted from remaining completely closed; the on-road transportation system i.e. from cart-pullers to the airline industries are undergoing a major economic crisis. An empirical research conducted in Germany projected the dynamic impact of COVID-19 on the transportation volume and bulk-goods capacity in food material trade. The bulk-goods capacity tended to depend on the total number of arising fresh infections per day rather than the length of pandemic (Loske, 2020). An upsurge in transportation of essential goods was found to be in proportion with the demand of groceries. Talking in terms of transportation, freight segment has faced an ambiguous demand pattern, whereas business or profit in public transport has shown a steady fall. United Nations Economic Commission for Europe (UNECE) reported intriguing data outcome regarding transportation of several countries as following (UNECE, 2020). Early lockdown period have witnessed a downfall in road fatality in countries such as France (~56%), Norway (~54%), London (~36%), Ireland, Israel etc. Compared to the month of 2019. Road traffic reduced considerably. In New York City vehicle miles were approximately fifty million as per March 13 whereas it fell to ten million within April 13. Budapest confirmed 90% reduction of bus commuters as well as 50% decline in traffic congestion. In Berlin, road traffic reduced by 40%. However, cyclists increased by 50% in New York city during March 2020. Countries like, Italy, Switzerland, Germany, Norway faced a sharp drop in passenger vehicle registration in March 2020 as compared to the previous years. Nevertheless, collision rates have taken a nosedive across the globe. The positive effect of ‘sustainable mobility’ which concerns environmental preservation in form of cycling has however gained much priority as a mode of transportation in several countries. However, in order to keep up to earn revenue and sustain transport sectors American airlines have transformed several passengers’ flights to good-carriers (TERI, 2020). Moreover, transportation system has well contributed during the challenging period by converting passenger trains to mobile hospitals, offering free boarding to patients and front-liners, delivering relief goods to red zones etc.

Scientifically suitable approaches that may lead to strong policy decisions on transportation system in terms of COVID-19 pandemic are deficient. Hence, even after the lockdown is being lifted up across countries, passenger restriction in public transport should be prioritized as well as multiplying the number of passenger vehicles. Strict traffic control should be introduced everywhere to avoid vehicle jam and mass gathering. Online booking facility for every public medium of transport should be mandatory. Researchers of...
transport segment of different countries should stress on the concept of monetary compensation for each transport industries facing a massive loss throughout the pandemic. A recent investigation have projected a PASS (Prepare/Protect/Provide, Avoid/Adjust, Shift/Share, Substitute/Stop) method typically designed for transport policy making in the course of current and future threats (Zhang, 2020).

Nevertheless, this pandemic situation has adversely affected on mental well-being. Even though travelling and socialising have therapeutic effects on mental health, all such activities have come to a standstill. It was found that quarantined individuals grow more prone towards developing a spectrum of mental illness, where mood swing, confusion, irritability, numbness, stress, anger, anxiety, grief, depression, insomnia are evident (Brooks et al., 2020). Beyond the social scenes, SARS-CoV-2 episodes have been fetching loads of stressors into the locked lives of people, such as duration of the lockdown, loss of freedom, boredom and frustration, social separation, inadequate lifestyle supplies, financial crisis, increased family issues and domestic violence, anxiety related to local news as well as rising case numbers, stigma, fear of contracting the disease, uncertainty about life, fear of losing closed ones and fear of death (thanatophobia).

Researchers have also reported serious case studies of stress disorders. During the outbreak of SARS in 2003 outbreak, a study reported that quarantined individuals displayed symptoms of frustration (58.5%), annoyance (54.3%), worry (40.2%), loneliness (38.5%), helplessness (31.7%), anger (28.6%), Fear (22.4%), nervousness (18%) and sadness (18.1%) whereas only 4.7% reported to be happy (Reynolds et al., 2008). Other investigation also concluded that healthcare professionals, children, elderly and people with underlying mental health issues were inevitably susceptible to psychological distress during the outbreak of any epidemic. Health-care professionals remain at a high risk of physical and mental fragility. Insufficient testing, inadequate treatment options, lack of enough Personal Protective Equipments (PPEs), extensive workloads, agitated public reactions etc. are certain additional stressors (Pfefferbaum and North, 2020). Healthcare workers who were quarantined earlier after having contact with SARS patients, developed symptoms of acute stress disorder, exhaustion, anxiety, poor attentiveness, indecisiveness, worsening work performance and even consideration of resignation. Moreover, post-traumatic stress disorder (PTSD) symptoms were persisted 3 years later (Brooks et al., 2020). Also, alcohol abuse or addiction symptoms were found to be correlated with them even after 3 years (Wu et al., 2008). Later, another study conducted after an epidemic breakout reported that mental health was much unstable among quarantined individuals. Younger ones were vulnerable. Moreover, the married population had more mental fitness than the single counterparts (Liua et al., 2012). In the following years a study on pandemic discovered that quarantined mothers with children needed mental health protection or counselling services during or after the episode. Out of the total cases 16.7% of children were found to have acute stress disorder (16.7%), adjustment disorder (16.7%), grief (16.7%), and cases of post-traumatic stress disorder (PTSD) were reported to be 6.2%. PTSD scores were four times higher among quarantined children (Sprang and Silman, 2013).

Research conducted in China on the onset of COVID-19 showed that Chinese psychosomatic deterioration. Physical symptoms like muscle ache; coryza and dizziness were directly related to heightened level of stress, anxiety and depression. Most of people displayed hypochondrias and apprehended becoming COVID patient. Also the very thought of infecting their family members was found to be highly prevalent (Wang et al., 2020). Cases of dire panic were reported (Roy et al., 2020). The most panic stricken section of population was youths, females and co-morbid individuals (Varshney et al., 2020). Insufficient health care and infrastructure for COVID-19 treatment created panic among the patients and their caretakers. (Paz et al., 2020). A study held in Japan also exposed higher rate of depressive and anxiety symptoms among the economically weak, part time workers and unemployed population, and part-time or provisional workers (Ueda et al., 2020). Zhang, Yang and team found that more than one-third of the Chinese population faced insomnia during this COVID-19 episode (Zhang et al., 2020). Internal migrant workers who constituted to be one of the most vulnerable sections of the society were found to develop serious mental distress (Choudhari, 2020) and many were reported to commit suicide.

Parenting stress also increased due to the online schooling in Japan (Hiraoka and Tomoda, 2020). Most of the children confined at home demanded more parental attention and supervision. Eventually, it turned out to be strenuous for parents as well. It was reported to be quite strenuous on the part of the parents to manage household chores, do online work from home as well as monitor their children’s academic life. A surge in numbers of domestic violence and child abuse are correlated with the affected mental state of the victims (Lee, 2020).

The social distancing almost galvanized people mentally and brought sea change in behavioural pattern of individuals across the globe. According to the recent policy briefs by United Nations, “The mental health and wellbeing of whole societies have been severely impacted by this crisis and are a priority to be addressed urgently” (UNSDG, 2020). World Health Organization is stressing upon #HealthyAtHome hash tag. For psychosocial well-being biological, emotional, spiritual, social, mental and material aspects are extremely instrumental. Family and community networks exclusively play pivotal roles in the developmental process of a human being. Even though virtual socialization is acting as a support system by so far, but to a great extent it is mode of and faceless medium of communication.

New research methodologies and policy making in all distressed countries should focus on short and strict lockdown at the hotspots, adequate and rapid supplies of basic needs to the homes under lockdown, promoting trusted news-sources to cut down misinformation, enough psychological services through e-care and telemedicine. Government bodies should support the contribution of multidisciplinary mental health teams at national and state levels; provide psycho-educational material and training in stress management with special reference to pandemic stress; ensure infrastructure of alternative mental health services accessible to the public. Risk of losing livelihoods after the period of lockdown is putting a ‘macro-stress’ on vulnerable populations. ‘Work from home’ opportunities should be increased to mitigate the frustration after sudden change in work schedule and financial thoughts. Safe social services systems are needed for providing surveillance and intervention following up the reports of problems by vulnerable people (such as domestic
violence or child abuse) in this period of lockdown. At the individual level, intake of healthy meals and mood enhancing dietary supplements should be augmented. Practice of mindfulness, meditation, exercise and breathing exercises can switch off the fight or flight system.

However, in this present scenario of COVID-19 have put many nations into bewilderment, especially the nations with high density population is somewhat facing problems in disciplining people about certain nitty-gritty like the advice on use of masks, opting for a hygienic lifestyle and professing cleanliness morale. They should brainwash every individual about the severity and gravity of the pandemic so as to make people become more aware and conscious. Nevertheless, it is of utmost and equal importance on the part of the government to boost research counterparts, find out scientific and conducive ways to construct new policies for the transportation industries as well as psychological wellbeing of citizens.

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