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Chapter

COVID 19 and Quality of Life in Indian Context

Ganapathy Sankar Umaiorubagam, Monisha Ravikumar and Santhana Rajam Sankara Eswaran

Abstract

Battling the novel COVID-19 pandemic has caused emotional distress and many nations lost their humans at the fight against the virus. Quality of Life (QOL) has a wide range of contexts, including the fields of international development, health-care, politics and employment. Standard indicators of the quality of life include wealth, employment, the environment, physical and mental health, education, recreation and leisure time, social belonging, religious beliefs, safety, security and freedom. Being a poor economic country like India, lockdown during COVID 19 devastated occupation, education, recreation and money from the people and the fear of the disease impacts not only on the health of the individuals but also the quality of life of individual is affected.

Keywords: Containment zone, nationwide lockdown, Poor economy, Life impact, Indian context, Burden from family members

1. Introduction

1

Countless nations in the world have vanished their human and economic resources while battling the novel corona virus disease. The swiftness in broadcast of the virus has positioned general public and governments on tenterhooks, recognizing that Covid-19 crash not only the corporal wellbeing of individuals but also their quality of life and, ensuing in many sufferers over the world. Negative outcomes such as depression and anxiety were the result of the viral outbreak and the research on the viral outbreak indicated psychological distress and flush disgrace and chauvinism towards citizens alleged of being tainted and exposed to the Corona Virus infection [1].

Apparently, apprehension of the ailment has in many cases enhanced and led to suicidal tendencies. The economic times of India 2020 examined and reported that there are around 300 lockdown deaths in India and suicide is reported as a leading cause. For all intents and purposes, substantiation spotlight on the unfavorable outcomes of the disease, demand a pragmatic swing towards COVID-19 outcome that are defensive as well as affirmative, such as quality of life. Few researches were on the precautionary health behavior as well [2]. It is an granted actuality that the world boast on the system to continue to exist with the novel corona virus, and consequently, sympathetic of quality of life and the mental and demographic vibrant distressing it would certainly, furry the retreat in the psychoanalysis of people.

Consequently, there is a crucial need to glance at a lock down quality of life in the long-lasting of COVID-19 pandemic, as it restrain not only overall satisfaction in certain life areas, but also their implication, that is at prospect with livelihood and times of the virus. These researcher also illuminate that quality of life is skewed and necessitate professed contentment and significance vicinity such as occupation, self-interest, leisure, prospect to connect prolifically and inventively, potential in erudition of new things and acquaintances and friendship in one's life. Clearly, this accomplishment of quality of life is exaggerated and disrupted in the current world at present, which is puzzled with the infectious disease [3].

2. Factors influencing quality of life during COVID 19

Within the present world, people were reported with sky-scraping echelon of fretfulness, professed vulnerability and professed sternness and the empirical evidence indicates that people demonstrate anxiety to COVID-19, throughout the pandemic the situation continues and that leads to deterrent health behaviors [4]. Furthermore, an individual's delicate uniqueness through the aim of drive their bearing, certainty, goal and prospect outlook could cooperate a task in the implementation of health-related behaviors like social isolation and distancing to warfare the outburst of pandemic. Abundant research confirmation exhibit the action of buoyant prejudice and there is a report that elaborates that individuals ascertain themselves like they never experienced negative symptoms of COVID-19 and procrastinate themselves like they experience more of positive events. The role of individual bias in battling the novel corona virus crisis leads individuals to believe that they were not infected with the corona virus even when they presents with the signs and symptoms. As the fear of social stigma and isolation from the family members has not been on the cut-rate as it guide people to believe that they were not infected [5].

The assemble of alleged receptiveness and alleged sternness in amalgamation to the COVID-19 outburst, make up the Health Belief Model (HBM) with the intention of is influential context in explicating values concerning one's susceptibility to, and seriousness of the viral disease that notify change in activities, and by this means persuade quality of life. Individuals might experience noticeable warning sign of fretfulness such as appetite loss, queasiness, sleep annoyance, serenity and giddiness as demonstration of concern to COVID-19. Fascinatingly, an inspection of the relation sandwiched between sanguine bias and severity of the corona virus diseases demonstrate that persons who are confidently biased be inclined to underrate their professed vulnerability and sternness to the virus [6]. Personal recognition in the epoch of the outbreak may coerce individuals to re-examine their own execution in stipulations of their professed personal risks and susceptibility that then leads them to engage in preventive health behaviors. The maneuver of these individual-based construct including quality of life are multifaceted and necessitate a need to perhaps go further than what is prescribed in health belief Model- to inspect the responsibility of group-related variables throughout the prism of social distinctiveness loom [7].

What materializes within the sequence of events adjoining the pandemic of the novel corona virus is the stress not simply on responsibility of the human being, but auxiliary so on top of the communal or "we". To ensure the protection of others from the infection there are measures like social distancing and wearing of facemasks and that outline the need for ensuring and protecting the members of the society on or after the infection [8]. It is in this illumination, that the responsibilities of the assemblage appear to contradict the spread of COVID-19 and to cope

it. For people, communal exploit that warrants harmony may be obvious in their recognition with their family, spiritual community and also with their nation. Perceptibly, a hypothetical scaffold such as that of the Social Identity Approach (SIA) facilitate an thoughtful of how assembly dynamics engage in recreation out in the present health crisis [9].

Family cast the person all the way through their lifetime and consequently, is indispensable for self- indulgence and description. Learning demonstrate that a person's pious connection or cluster not only generates their social individuality persuade spiritual and material behavior, but also poke that person hooked on to action in social contexts. During a catastrophe such as the COVID-19 pandemic, recognition with the country as a civilian is decisive not only for self-perception, but also for communal judgment with "other" pertinent countries in terms of events to administer and gear the outbreak. Conceivably, the salience of group credit with one's family, religious brethren and one's nation may have comportment not only on enviable health behaviors, but more prominently on the qualitative characteristic of one's life [10].

It is appropriate to differentiate that in the current COVID-19 pandemic, the responsibility of human being 'me' factors, through the Health Belief Model has been imperative to cheering people to slot in preventive health behaviors. Nevertheless, what in addition needs deliberation it is the social natures of the pandemic, that quarrel in favor of a 'we' or combined approach, headed specifically to edge and take into custody or arrest the virus spread all the way through a communal distinctiveness viewpoint [11]. Agreed the significance of combined person and group factors resting on the top of the multifaceted phenomenon such as quality of life, the interaction of HBM and SIA as hypothetical prisms to distinguish the role of the former on the latter is measured relevant in the present chapter.

Particularly COVID-19 is considerably shifting the method human being are living and their source of revenue their lives, it is relevant to scrutinize authority on quality of life such as demographic factors, person and group variables. Citizens with privileged levels of instructive achievement and incomes were linked with elevated quality of life predominantly allied to health concerns [12].

There are individual echelon and capricious of COVID-19 nervousness plus individual characteristics considerably forecast quality of life and optimistically modify and alter their existence in areas of friends, erudition and inspired behavior counting their view of themselves and others [13].

Individual factors inclined quality of life negatively and the latter, positively. For all intents and purposes, this would indicate to facilitate person with discriminating anxiety over the viral infection would in addition worsen quality of life. Believably, the outlook that the disease signs 'the end of the world experience', there by leading to disquiet and agony [14]. The fear elicited by the pandemic affects relationships with negative impacts and learning endeavors were also affected. Fretfulness about the COVID-19 risk might bestow rise to hesitation and bewilderment hamper qualitative living. On the divergent side, individual distinctiveness which affords an apparent prudence of existence bearing, self-assurance of their objective and prospect occasion valor thrust individuals. In fact, countless Indians had testimony end enduring paying superfluous contemplation to their physical circumstance, reassuring, exercising and dormant ensuing to the commencement of the COVID-19 pandemic [15]. It is steadily extra noticeable with the intention of the temperament of the corona virus occurrence that demand huddle exertion to surround it's transmit and manage it.

Social gratitude in the middle of relatives and motherland significantly estimate quality of life. Basically, the vituperative illness is concerning to demolish cluster psychology to facilitate as well as necessitate society involvement and engagement.

Debatably, family detection and constancy encourage well-being and buoyancy, which possibly will have completely impacted quality of life positively. In hefty level disaster, citizens be liable to describe themselves within stipulations of their communal individuality [16]. In this pandemic too, such cluster memberships which is specifically foundation on relations and population are appreciated as a reserve that tie and connect citizens jointly changing completely aspects of spare time, novel chase, acquaintances and friendships in life. In totaling, cluster we recognize in the midst of psychological capital in philanthropic live meaning, purpose and self-worth. In the background of nationalized recognition in COVID-19 times, discriminating intergroup association is prepared about additional nations' retort and managing the outburst which place the nationalized groups in a constructive radiance as obvious in the container of the United States of America. Recognition of Indians by means of the clarion call of banging tackled by our honorable Prime Minister on 22 March 2020 to exhibit support for vanguard fitness personnel skirmish the virus is apparent and Indians knock pots and pans to hold up fight had positive crash on their philosophy of themselves, artistic pursuits, friendships and education activities [17].

Existing COVID 19 virulent disease circumstances within India exposed that quality of life is considerably biased by a person and the factors associated like personal identity and COVID-19 pandemic anxiety over and above demographics. Additionally, societal or group individuality were impact quality of life considerably over and beyond individual variables [18].

3. Associations of COVID-19 and mental health

Literature review and media report give information on community suggestion and responses. Principally, how an assortment of entrenched socio cultural factors determining the individuals' rejoinders are fetched to the forefront. In the context of SARS, researcher indicated that the trepidation resulted from the unidentified grounds of the illness and a likely fatal upshot. The novel corona virus has comparable implication because the country getting besieged in this disaster and the common people is showing immense symptom of anguish [19].

During the current circumstances of countrywide lockdown, repeated communal media reports on COVID-19 is the reason of extensive over-whelmed activities along with the common public. The information channels are filled up of negative incidents and individual sufferings especially medical personnel, clients, suspect and quarantined people who are in front of disgrace and inequity by the societies. At present, information about the virus is amplified from every resource. Throughout day, people are be reminiscent concerning the virus through reports, gossips and announcement through Television, and Instagram, Facebook updates etc. The opinion and worries could be irresistible and all-consuming. Research studies calculate approximately the occurrence of psychological ills and inspect persons involvement with social media experience demonstrated a constructive association flanked by the two [20].

There has been intelligence of an abrupt rush in familial brutality and child cruelty occurrence in during lock down in India. In COVID 19 lockdown, various places in India have been numeral stressor which covers anguish among inhabitants, for example, quarantine, cuts in daily wages, redundancy, vagueness, insecurity, uncertainty, trepidation, brutality, abuse etc. Whereas quarantine is an essential precautionary gauge to restrain the stretch of infectious disease, countless researches have reported a pessimistic psychosomatic outcome of quarantine on persons. Imprisonment at home is not a lucky thing for several, particularly persons

who boast in violent relations. The lockdown has goaded the state of affairs for fatalities of conjugal and marital brutality [21].

National Commission of women reported that 214 grievances were conventional out of which 58 are of marital violence during last week of March 2020. The swell in cases as well as complaints has been accredited to offender due to restrained in home with no rebuff to their annoyance or aggravation and the defenselessness of the wounded to split their misery or pass through to their friends or families due to quarantine. During lockdown period, Indian government 'Childline' helpline has acknowledged about 90,000 grief complaints on cruelty and brutality applying for safety, this stage was extended incarceration for children restricted with their offender at residence [22].

Repeated concerns are uttered owed to the extended lockdown circumstances which have resulted in a record financial disaster so as to have counted families. The CMIC (Center for Monitoring Indian Economy reported that redundancy pace in India may perhaps have scaled to above 20 per cent because the financial crisis due to thrashing of employment after an all over the country wide lockdown which is initiated in the last week of March 2020. There are plentiful of investigation in the journalism on pessimistic possessions of redundancy on psychological wellbeing. The unexpected impose of the lockdown noticeably affect the deprived and susceptible individuals in many ways [23]. Due to profound trepidation associated to jobless and malnourishment between refugee employees in the private sector, there has been a gathering from urban and rural for evacuation to native places. The rapid and explosive in nature of sequence of COVID-19 on universal financial system is firm to clutch, However, numerous specialist express a trepidation associated to subsequent financial downturn. Various researchers found that redundancy influence person mental health. Unemployment is inclined to craft people more psychologically unstable. There has been an enormous covenant of research on the subject since 1930 [24].

An additional budding characteristic which unfavorably affect the public is the disgrace which is emotionally involved to the ailment. The WHO accounts that COVID-19, being a novel disease, is bounce to root bewilderment, disquiet and trepidation between public. These features are capable to increase damaging stereotypes. Owing to allied disgrace populace can be obligated to conceal the ailment due to fright of bigotry, avoid populace from looking for health care at once and might dishearten them from commencing to adopt healthy behaviors [25]. Humiliation has hardnosed associated with infected persons, family and still healthcare workers were also disgraced. The newspapers reports stated that medical personal brutally assaulted due to the disgrace and impact of corona virus ailment may be deep and there are proposition that commit suicide numbers will increase [26].

There is information hammering in as of all media in relation to the concern and stressors crop up owing to COVID 19 which are foundation to psychosocial pressure between individuals, family and community which might be a fundamental reason intended for mental illness [27]. The signs and symptoms have commence to appear, it might be fleeting or permanent, at this instance it might exist tough to forecast the outcome and requires a systematic investigation to understand the corona virus.

Subsequent to a nationwide lockdown proclaimed on last week of March 2020, contained by five days Kerala have recorded with eight cases of suicide by persons, who botched to hack it with alcohol abandonment. It is indicated that consumption of alcohol termination after the periods of very serious consumption of alcohol might precipitate the alcohol withdrawal disorder. The sternness and prototype of physical and psychological disturbance were diverse from individual to individual; it can be explained as self-harm [28].

The news information which interrogates psychiatrist of foremost major hospitals in New Delhi elucidate that depressive patients have ongoing irritability of apprehension related to panic of COVID-19. Most number of patients uttered the fright of constricting the contamination, whereas some patient's uttered vagueness connected to losing the employment or household problems. The specialist uttered anxiety over increasing level of dissonance and discords in the household environment due to lockdown, deficit in social connectivity for patients and withdrawal symptoms for alcohol and substance abuse who are familiarized and reliant. The consequences of research poll depicted that almost 45 percent of the adults in India reported that because of frequent stress and sufferings over the corona virus pandemic and death rate, their mental health have been adversely affected. The circumstances are probable to get grimmer as the pandemic wears on [29, 30].

4. Indian economy during COVID 19

During the declaration of 21 days national lockdown, Prime Minister Narendra Modi stated that this lockdown will have pessimistic financial collision and we boast to disburse the penalty intended for it. The All India Association of Industries (AIAI) predictable defeat for Indian financial system schedule to be \$640 million with intensification schedule to be between 5 and 5.6% till 2022. Subsequent to the first lockdown contained for 7 days the electrical energy stipulate abridged to 30%, transfer in harbor reduced 5%, Petrol and Diesel requirement tapering with 70%, and rail bustle be under 36% compare with 2019. The redundancy amplified to 19% following a month of lockdown and on the whole redundancy was 26% in India on 24th April. Therefore, the lockdown has a chaos crash on small, medium, and large venture of the nation that guide to unemployment and financial slump circumstance [31].

For food delivery there are only two alternatives at the time of home confinement and lockdown. Swiggy and Zomato, were the food delivery agents but the pandemic made them to lay off the workers. Ultimately the fewer number of workers have to deliver the food across 300 cities and they knob for a day over a million deliveries. Indian tourism division also projected 70% unemployment during pandemic. Similarly, India have an financial system wherever a hefty division of citizens depends on the everyday salary e.g. auto drivers, wood workers, delivery boys and girls, domestic manual worker, crumb or waste collector, Electrician, construct worker, fruit and vegetable vendor, and servants. Uninformed about cease of COVID-19 and constrained lockdown scenario, recurring to its pre-lockdown juncture will take time. The tourism and airlines industry are predicted to affect growth significantly in 2020 and Gross Domestic Product growth is predictable to turn down ~2.5% from 5.3% in 2022 [32].

5. Indian life style during COVID-19

Existence in India comprises rural and urban and people together acquired affected by COVID-19. The ailment during spread was formerly epicenter in every main metro as well as wealth municipality of Indian states. Nevertheless, equally inhabitants as of rural and urban sectors countenance genuine disturbed circumstances. COVID-19 has twisted a pessimistic crash on life of every individual. Primarily to broken down the speed of spread and affected cases with COVID-19 there are broadcast on locked down measures. In India initially from last week of March, 1300 million people were under monitoring in lockdown condition [33, 34].

Social isolation, recommended in India, is hard to chase for the metropolitan underprivileged people who continue to exist in slums or overcrowded and petite seats. Mumbai municipality also branded as the industry city of India is famous for its more number of slums. It is predictable that 0.009 billion individuals survive in Mumbai slums and their houses are moderately 10 ft. by 10 ft. and beneath such states of affairs comply with social isolation is an uncertain matter. In revisit, statistics showed that highest number of COVID positive cases in Maharashtra and maximum number in Mumbai municipality [35].

Moreover, unexpected lockdown and its implementation on last week of March 2020, enforced millions of refugee employees on the way to experience a vague opportunity devoid of relations, foodstuff, and work. Normally, 0.05 billion populace migrate from one state to another state for work. Owing to lockdown, refugee employees were compulsory to shift out of their town and return to their residence in native places. Due to lack of transportation amenities, employees with infant, old age people and pregnant women were enforced for walking [36].

Supplementary commands for workplaces similar to employment from residence were recommended in India which is nevertheless appropriate merely for city in good socioeconomic status people and is demanding for the cultivation-based people. In addition, India yet deficient in computers amenities and the internet, and hence the plans implemented by the government like work from home is a dare. The Indian IT manufacturing with mainly call-centers was not prepared for work from home circumstances. However, a routers and portable hotspot dongles demand were pragmatic in India during the COVID-19 lockdown and work from home situation causing a modest increase up to the telecommunication. Therefore, India practiced the second largest challenge in its history following the separation of India in 1947 [37].

6. Education during COVID 19

The influence of educations on the quality of life framework looked at seven broad life domains:

- 1. Achieving in life,
- 2. Standard of living,
- 3. Emotional well-being/resiliency,
- 4. Physical health,
- 5. Society,
- 6. Intimate relationships,
- 7. Personal safety.

The domain that enhances the quality of life is not an island; each factor exists jointly with the others [38]. Consequently, the possessions of educational accomplishment on quality of life are multidimensional and often mutual. In elucidation of this, we believe it constructive at this point to give some contemplation to the dynamic nature of the association between education and quality of life. This COVID 19 disaster has uncovered the plentiful meagerness and injustice in our

edification scheme – commencing right of entry to the broadband and computers required and used for online education, and the accommodating surroundings desired to spotlight on education, up to the misalignment between capital and requirements. Paralleling, the tutoring scheme, and the institute are also at present detained due to COVID-19 in India.

The lockdowns in answer to COVID-19 boast episodic old-fashioned education with countrywide schools shutting down in India [39]. Even though the didactic community has prepared strenuous pains to preserve education permanence throughout this epoch, students of primary schools boast had to rely further on personal assets to persist education remotely through the Internet, television, or radio. The enlightening institutions were clogged which slowed down the general teaching-learning process and the education structure confided that there are no online systems among rural school children of India. In rural India, there is a disparity of financial circumstances which leads to a lack of computer systems and android mobile amid the entire student. On the other hand, ease of access of 3G and 4G networks, Cell phones in the city areas, resulted in online classes for students, whereas in rural areas hang down of teaching and learning [40].

Teachers were forced to become accustomed to educational perception and the approach of the liberation of education, for executing the task there is no need for training. Scrupulous, beginner in the most marginalized assembly, those who have failed to have admittance to digital erudition capital or be deficient in the pliability and rendezvous to become skilled at own, are at risk of falling behind. The collision on educational veracity has been experiential around the world. A mount in agreement deceitful plus scholastic file-sharing and examination deceitful be recognized as on the whole problematic. Owing to the actuality that education is habitually distant ever since the setup of COVID-19 in March, deceitfulness has turned out to be far easier for students. There is no penitence from students because attitudes have shifted away from prioritizing edification over other stuff [41]. Loads of institutions twisted to commercial services to take over exam proctoring, but roughly immediately apprehension was shifted up concerning student solitude, inspection, and the collapse of student mental health. The deficiency in learner and educator communication has resulted in learners experiencing fewer adoring concerning the veracity of theirs exertion. These foliage students to twist in fragmentary homework obtain the response from their associates in section because education has become less important due to COVID-19.

7. Healthcare during COVID 19

Healthcare amenities face grave occasion in India. In Usual situation accessible beds ratio for rural people were 3.2 per 10,000 and 11.9 per 10,000 for urban which had to enhance to provide bed for COVID 19 clients, several disturbance and inconsistency were noted experiential for other disease intervention. Small complexity happened for children vaccination program and disturbance of renal dialysis, radiotherapy for adults. Tuberculosis (TB) acquire the uppermost level of encumber in India which commonly occur owing to undernourishment as a result of destitution. Lockdown have a huge escalating collision on the TB cases were susceptible to COVID-19 disease. Nonetheless, to supervise the COVID-19 cases, college, restaurants, coaches in the train, were transformed into quarantine amenities while sports ground were distorted into isolation wards. Segregation, dread, indecision, financial chaos is a few reason to a great extent cause mental anguish among humans due to COVID-19 [42].

In India destitution, malnourishment, appetite is yet to a subject with the intention to shoot up due to COVID-19. Group redundancy is probable to generate

annoyance and force citizens to chronic hassle, fretfulness, sadness, alcohol reliance. In the 2008 financial crisis, 10,000 "economic suicides" victims were accounted in the western and European countries owing to the economic crisis. On behalf of a nation with more number of poverty, starvation and person with depression and nervousness, India reported higher suicides. Allegedly on 12th Feb 2020, a 50 year gentle man recognized with a viral infirmity have a steady trepidation of receiving contaminated by COVID-19 and that made him to consign suicide [43, 44]. Additional, suicide victims were recorded for the motive of proscription alcohol throughout the lockdown phase. Additionally, resting at residence throughout the lockdown, create poor physical activity and harmful food practice which leads to obesity, diabetes mellitus and prone to develop cardiac disease.

8. Conclusion

In this chapter we have discussed about India preparedness to contract with an rising number of COVID positive clients, managing with the existing state of affairs such as unfavorable possessions on the financial system, humanity, and atmosphere during the COVID-19 lockdown epoch all along with a choice of approach embark on to conquer this pandemic. The pandemic of COVID-19 has complete obvious impact on the authority of age, gender, education, and income and repression sector scheduled on the quality of people's life. Individual factor, especially, apprehension about the disease and individual uniqueness furthermore crash Quality of Life. In a similarly group-based or social recognition of persons, predominantly their relations and the ignition have affected their life's quality.

Captivatingly, fretfulness, professed receptiveness and sternness of COVID-19, down by means of individual distinctiveness and optimistic bias will predict Quality of Life. Finally, the big question in Indian context is whether the COVID-19 or hunger that kill the people? As the pandemic is ongoing, it is mandatory government agencies and healthcare personal to recognize the necessity to safeguard the quality of people's life. Moreover, precaution and vaccination will help to overcome COVID 19 challenges.

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References

- [1] Ahuja, S. (2020). Experts hint at a rise in mental illness due to COVID-19, suggest inculcating positive thoughts. NDTV News. https://swachhindia.ndtv.com/experts-hint-at-a-rise-in-mental-illness-due-to-covid-19-suggestinculcating-positive-thoughts-43866
- [2] A., Srivastava, B., & Pandya, D. (2020). Doctors come under attack in India as coronavirus stigma grows. Bloomberg News. https://www.bloomberg.com/news/articles/2020-04-13/doctors-come-under-attackin-india-as-coronavirus-stigma-grows
- [3] Brooks, S. K., Webster, R. K., Smith, L. E., Wesseley, S., Greenberg, N., & Rubin, G. K. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. Lancet, 395, 912-920.
- [4] Chakraborty, P. Maity, COVID-19 outbreak: migration, effects on society, global environment and prevention, Sci. Total Environ. 728 (2020) 138882, https://doi.org/10.1016/j. scitotenv.2020.138882.
- [5] T. Singhal, A review of coronavirus disease-2019 (COVID-19), Indian J. Pediatr. 87 (2020) 281-286, https://doi.org/10.1007/s12098-020-03263-6
- [6] Worldometer coronavirus cases India, n.d. https://www.worldometers.info/coron avirus/country/india/
- [7] N.P. Shetti, R.K. Srivastava, S. Sharma, S. Basu, T.M. Aminabhavi, Invasion of novel corona virus (COVID-19) in Indian territory, Sensors Int. 1 (2020) 100012, https://doi.org/10.1016/j.sintl.2020.100012.
- [8] Department of Health Research & Director General ICMR Ministry of Health & Family Welfare, Empowering Citizens for Testing of SARS-CoV-2 Virus to Save Precious Lives and Contain

- the Virus, 2020. https://www.icmr.gov.in/pdf/covid/strategy/Joint_Letter_ Test_Track_Treat.pdf.
- [9] Indian Council of Medical Research, PRESS RELEASE How India ramped up COVID-19 testing capacity. https://www.icmr.gov.in/pdf/press_realease_files/ICMR_Press_Release_India_testing_story_20052020.pdf, 2020
- [10] A. Kapoor, U. Pandurangi, V. Arora, A. Gupta, A. Jaswal, A. Nabar, A. Naik, N. Naik, N. Namboodiri, A. Vora, R. Yadav, A. Saxena, Cardiovascular risks of hydroxychloroquine in treatment and prophylaxis of COVID-19 patients: a scientific statement from the Indian Heart Rhythm Society, Indian Pacing Electrophysiol J. 20 (2020) 117-120, https://doi.org/10.1016/j. ipej.2020.04.003
- [11] M.Z.M. Nomani, M. Rauf, Z. Ahmed, T. Faiyaz, S.A. Khan, Quarantine law enforcement & corona virus (COVID-19) pandemic in India, J. Xidian Univ. 14 (2020), https://doi.org/10.37896/jxu14.4/068.
- [12] P. Pulla, Covid-19: India imposes lockdown for 21 days and cases rise, BMJ 368 (2020) m1251, https://doi.org/10.1136/bmj.m1251.
- [13] J. Saha, B. Barman Barman, P. Chouhan, Lockdown for COVID-19 and its impact on pupil mobility in India: an analysis of the COVID-19 Community Mobility Reports, 2020, Child. Youth Serv. Rev. 116 (2020) 105160, https://doi.org/10.1016/j.childyouth.2020. 105160.
- [14] The Lancet, India under COVID-19 lockdown, Lancet 395 (2020) 1315, https://doi.org/10.1016/S0140-6736 (20)30938-7.
- [15] R. Varalakshmi, R. Swetha, Covid-19 lock down: people psychology due to

law enforcement, Asian J. Psychiatr. 51 (2020) 102102, https://doi.org/10.1016/j. ajp.2020.102102.

- [16] T.W. Channel, As projections warn of 13 lakh COVID-19 cases in India, ICMR says social distancing can reduce spread by 62%, the weather channel. https://weather.com/en-IN/india/coronavirus/news/2020-03-30-projections-warn-13-lakh-covid-cases-india-icmr-social-distancing, 2020. Accessed 15th June 2020.
- [17] B. Paital, K. Das, S.K. Parida, Inter nation social lockdown versus medical care against COVID-19, a mild environmental insight with special reference to India, Sci. Total Environ. 728 (2020) 138914, https://doi.org/10.1016/
- [18] N.P. Shetti, R.K. Srivastava, S. Sharma, S. Basu, T.M. Aminabhavi, Invasion of novel corona virus (COVID-19) in Indian territory, Sensors Int. 1 (2020) 100012, https://doi.org/10.1016/j.sintl.2020.100012.
- [19] A.N. Konwar, V. Borse, Current status of point-of-care diagnostic devices in the Indian healthcare system with an update on COVID-19 pandemic, Sensors Int. 1 (2020) 100015, https://doi.org/10.1016/j.sintl.2020.100015.
- [20] Bhattacharjee, M. Kumar, K. Kumar Patel, When COVID-19 will decline in India? Prediction by combination of recovery and case load rate, Clin. Epidemiol. Glob. Health (2020), https://doi.org/10.1016/j.cegh.2020.06.004, 0-1.
- [21] Malavika, S. Marimuthu, M. Joy, A. Nadaraj, E.S. Asirvatham, L. Jeyaseelan, Forecasting COVID-19 epidemic in India and high incidence states using SIR and logistic growth models, Clin. Epidemiol. Glob. Health (2020) 1-8, https://doi.org/10.1016/j. cegh.2020.06.006.
- [22] K. Mehta, S.S. Jha, COVID-19: a nightmare for the Indian economy,

- SSRN Electron. J. (2020) 333-347, https://doi.org/10.2139/ssrn.3612676.
- [23] Estimated Loss for Indian Economy Slated to be \$640 Million Due to Coronavirus Crisis, Economic Times, 2020. https://www.timesnownews.com/business-economy/economy/article/estimated-loss-for-indian-economy-slated-to-be -640-million-due-to-coronavirus-crisis/568972
- [24] Balajee, S. Tomar, G. Udupa, Fiscal situation of India in the time of COVID-19, SSRN Electron. J. (2020) 1-27, https://doi.org/10.2139/ssrn.3571103.
- [25] G.D. Sharma, M. Mahendru, Lives or livelihood: insights from locked-down India due to COVID19, Soc. Sci. Humanit. Open 2 (2020) 100036, https://doi.org/10.1016/j.ssaho.2020. 100036.
- [26] The Economic Times. (2020). Govt helpline receives 92,000 calls on abuse and violence in 11 days. 8 April 2020. https://economictimes.indiatimes.com/news/politics-and-nation/govt-helpline-receives-92000-calls-on-abuseand-violence-in-11 days/articleshow/75044722.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
- [27] COVID-19 j Post-pandemic, India's Tourism Sector Stares at 70% Job Loss, The Hindu, 2020. https://www.thehindu.com/news/national/kerala/coronavirus-to urism-sector-stares-at-70-job-loss/article31310234.ece.
- [28] COVID-19 Outbreak in China An Opportunity for Indian Manufacturing, Say Industry Captains, Economic Times, 2020. https://economictimes.indiatimes.com/news/company/corporate-trends/covid-19-outbreak-in-china-an-opportunity-for-indian-manufacturing-say-industry-captains/articleshow/74490354.cms.
- [29] P. Chatterjee, Indian pharma threatened by COVID-19 shutdowns in

- China, Lancet (London, England) 395 (2020) 675, https://doi.org/10.1016/ S0140-6736(20) 30459-1.
- [30] S. Gautam, COVID-19: air pollution remains low as people stay at home, Air Qual. Atmos. Health (2020) 853-857, https://doi.org/10.1007/s11869-020-00842-6.
- [31] After Zomato, Swiggy Sacks 1,100 Workers, The Siasat Daily, 2020. https:// www.siasat.com/after-zomato-swiggysacks-1100-workers-1890707/
- [32] P. Sharma, M. Kaur, G. Narwal, Other side of the COVID-19 Pandemic: a review, Pharma Innov. 9 (2020) 366-369.
- [33] M. Sarfraz, K. Shehzad, S. Ghulam, M. Shah, The impact of COVID-19 as a necessary evil on air pollution in India, Environ. Pollut. 266 (2020) 115080, https://doi.org/10.1016/j. envpol.2020.115080.
- [34] S. Mahato, S. Pal, K.G. Ghosh, Effect of lockdown amid COVID-19 pandemic on air quality of the megacity Delhi, India, Sci. Total Environ. 730 (2020) 139086, https://doi.org/10.1016/j. scitotenv.2020.139086.
- [35] Mandal, S. Pal, COVID-19 pandemic persuaded lockdown effects on environment over stone quarrying and crushing areas, Sci. Total Environ. 732 (2020) 139281, https://doi.org/10.1016/j.scitotenv.2020.139281.
- [36] V. Garg, S.P. Aggarwal, P. Chauhan, Changes in turbidity along Ganga River using Sentinel-2 satellite data during lockdown associated with COVID-19, Geomat. Nat. Hazards Risk 11 (2020) 1175-1195, https://doi.org/10.1080/19475 705.2020.1782482.
- [37] K. Goswami, Covid-19: 4 Unbelievable Environmental Changes Seen in India since Lockdown, 2020. https://www.msn.com/en-in/ entertainment/hollywood/covid -19-4-

- vital-environmental-changes-evidenced-in-india-since-lockdown/ar -BB13vCko.
- [38] Harwell D (1 April 2020). "Mass school closures in the wake of the coronavirus are driving a new wave of student surveillance". Washington Post.
- [39] Eaton SE. "Academic integrity during COVID-19: Reflections from the University of Calgary". International Studies in Educational Administration. 48 (1): 80-85.
- [40] Agrba L (27 March 2020). "How Canadian universities are evaluating students during the coronavirus pandemic"How Canadian universities are evaluating students during the coronavirus pandemic". Maclean's.
- [41] Appiah KA (7 April 2020). "If My Classmates Are Going to Cheat on an Online Exam, Why Can't I?". New York Times.
- [42] K. Sarkar, S. Khajanchi, J.J. Nieto, Modeling and forecasting the COVID-19 pandemic in India, Chaos, Solit. Fractals 139 (2020) 110049, https://doi. org/10.1016/j.chaos.2020.110049.
- [43] H. Rahmandad, T.Y. Lim, J. Sterman, Estimating the global spread of COVID-19, MedRxiv 1 (2020) 2020, https://doi.org/10.1101/2020.06.24.20139451, 06.24.20139451
- [44] Galea, S., Merchant, R. M., & Lurie, N. (2020). The mental health consequences of COVID-19 and physical distancing: The need for prevention and early intervention. JAMA Internal Medicine, 180(6), 817-818. doi:10.1001/jamainternmed.2020.1562